B

Turning Indexable Inserts

B1~B90

Turning Indexable Inserts Identification System		B2
Insert Color		B3
Chipbreaker Selection		B4~B13
Negative insert		B4
Positive insert		B10
Cermet / Coated Carbide / Carbide Lineup		B14~B67
Negative Inserts	CN□□ … 80° Diamond	B14
	DN□□ … 55° Diamond	B19
	KN□□ … 55° Parallelogram	B24
	RN□□ … Round	B24
	SN□□ … 90° Square	B25
	TN□□ … 60° Triangle	B28
	VN□□ … 35° Diamond	B33
	WN□□ … 80° Trigon	B35
	Small Double Sided Tools	B38
Positive Inserts	CC□□, CP□□ … 80° Diamond	B45
	DC□□, DP□□ … 55° Diamond	B50
	JC□□ … 70° Diamond	B57
	RC□□ … Round	B57
	SC□□, SP□□ … 90° Square	B58
	TB□□, TC□□, TP□□ … 60° Triangle	B59
	VB□□, VC□□, VP□□ … 35° Diamond	B66
	WB□□, WP□□ … 80° Trigon	B70
	YP□□ … 45° Diamond	B78
Inserts for Back Turning	TKFB	B72
	ABS15 / ABW15 / ABW23	B72
Inserts for Bearing Machining	R□MT-BB / SNMF	B73
Solid Tip-bars		B79
Ceramic Inserts Identification System		B80
Ceramic Lineup		B81~B90
Negative Inserts	CN□□ … 80° Diamond	B81
	DN□□ … 55° Diamond	B82
	EN□□ … 75° Diamond	B83
	RN□□ … Round	B83
	SN□□ … 90° Square	B84
	TN□□ … 60° Triangle	B86
	VN□□ … 35° Diamond	B87
	WN□□ … 80° Trigon	B87
Positive Inserts	SP□□ … 90° Square	B88
	TB□□, TC□□, TP□□ … 60° Triangle	B88
Inserts for Hardened Rolls	RBG / RCGX / RCMA / LNUN	B89
Grooving Inserts	GH / GS	B90

Turning Indexable Inserts Identification System

Symbol	Shape
H	120°Hexagon
O	135°Octagon
P	108°Pentagon
S	90°Square
T	60°Triangle
C	80°Diamond
D	55°Diamond
E	75°Diamond
F	50°Diamond
M	86°Parallelogram
V	35°Diamond
W	80°Trigon
L	90°Rectangle
A	85°Parallelogram
B	82°Parallelogram
K	55°Parallelogram
R	Round

Shown angle stands for acute angle for diamond and parallelogram inserts.

①Shape Symbol

Symbol	Relief Angle
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°

②Relief Angle Symbol

Symbol (class)	Tolerance (mm)		
	Corner Height	Thickness	I.C. Size
A	±0.005	±0.025	±0.025
F			±0.013
C	±0.013		±0.025
H			±0.013
E	±0.025		±0.025
G		±0.13	
J	±0.005	±0.025	±0.05~±0.15
K*	±0.013		
L*	±0.025		
M*	±0.08~±0.18	±0.13	
N*		±0.025	
U*	±0.13~±0.38	±0.13	±0.08~±0.25

*Insert's periphery is as fired.
Tolerance difference is depending on insert size.

③Tolerance Symbol

Symbol	Hole	Hole Shape	Inserts Chipbreaker	Shape
N	No	–	No	
R			One Side	
F			Two Sides	
A	With Hole	With Hole	No	
M			One Side	
G			Two Sides	
W		With Hole and One Countersink 40°~60°	No	
T			One Side	
Q		With Hole and Two Countersink 40°~60°	No	
U			Two Sides	
B		With Hole and One Countersink 70°~90°	No	
H			One Side	
C		With Hole and Two Countersink 70°~90°	No	
J			Two Sides	
X	–	–	–	–

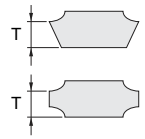
④Hole / Chipbreaker Symbol

	①	②	③	④	⑤	⑥	⑦	⑧
ISO (metric)	C	N	M	G	12	04	08	PS
ANSI (inch)	C	N	M	G	4	3	2	PS

⑤Edge Length Symbol (ISO)							I.C. Size (mm)	⑤I.C. Size (ANSI)	
C	D	R	S	T	V	W		IC Size (inch)	Symbol
03	04		03	06			3.97	5/32	1.2
04	05		04	08	08		4.76	3/16	1.5
		05					5		
05	06		05	09		03	5.56	7/32	1.8
		06					6		
06	07		06	11	11	04	6.35	1/4	2
08	09		07	13		05	7.94	5/16	2.5
		08					8		
09	11	09	09	16	16	06	9.525	3/8	3
	12	10					10		
		12					12		
12	15	12	12	22	22	08	12.7	1/2	4
16	19	15	15	27	27	10	15.875	5/8	5
		16					16		
19	23	19	19	33	33	13	19.05	3/4	6
		20					20		
22	27		22	38			22.225	7/8	7
		25					25		
25	31	25	25	44	44	17	25.4	1	8
32	38	31	31	54	54	21	31.75	1-1/4	10
		32					32		

・Expressed as edge length for ISO.
・ANSI expresses the inscribed circle diameter in inches.

⑥Thickness Symbol			
ISO		ANSI	
Thickness (mm)	Symbol	Thickness (inch)	Symbol
1.59	01	1/16	1(2)
2.38	02	3/32	1.5(3)
2.78	T2	–	–
3.18	03	1/8	2
3.97	T3	5/32	2.5
4.76	04	3/16	3
6.35	06	7/32	3.5
7.94	07	1/4	4
9.525	09	5/16	5



Thickness displayed as the distance between bottom surface and highest point on cutting edge.

⑦Corner-R(rε) Symbol			
ISO		ANSI	
Corner-R (rε:mm)	Symbol	Corner-R (rε:inch)	Symbol
Sharp Corner	00	.000	00
0.03	003	.001	0.1
0.1	01	.004	0.2
0.2	02	.008	0.5
0.4	04	1/64	1
0.8	08	1/32	2
1.2	12	3/64	3
1.6	16	1/16	4
2.0	20	5/64	5
2.4	24	3/32	6
2.8	28	7/64	7
3.2	32	1/8	8
Round Insert	00 (inch) or M0 (metric)	Round Insert	0

⑧Manufacturer'sOption

Hand Symbol, Chipbreaker Symbol, etc.

Usage example of manufacture's option

CNGU070301M F R - U

The cutting edge is sharp
Insert Hand
Chipbreaker Shape

CNGU070301M E R - U

Cutting edge with honing
Insert Hand
Chipbreaker Shape

Minus tolerance for Corner-R(rε) dimension tolerance of G Class (Ground Class)

- M: Corner-R(rε) represents minus tolerance.
  This is for convenience when drawing instruction R is "minus tolerance".

Corner-R(rε) = Drawing Instruction R

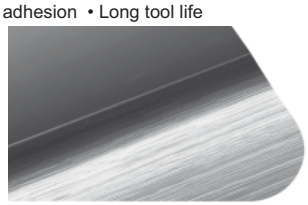
Features of insert with tolerance symbol of "E" Class

● High Quality Ground Insert "Super Fine"

- Applicable for mechatronics, electronics and high precision machined parts
- Sub-micron accuracy possible

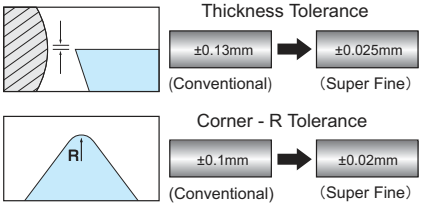
High Quality Ground Insert

- Reduced micro chipping during edge grounding
- Less adhesion • Long tool life



"E" Class Turning Insert

- Accuracy of index position after insert replacement



Insert Color

● Cermet, **MEGACOAT** Cermet and **PVD** Coated Cermet

Insert Grade	Cermet						MEGACOAT Cermet		PVD Cermet		
	TN6010	**TN6020**	**TN60**	**TN100M**	**TC40N**	**TC60M**	**PV7005**	**PV7010**	**PV7020**	**PV60**	**PV90**
Insert Color											

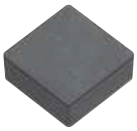
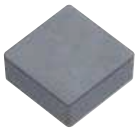
● **MEGACOAT** (carbide substrate)

Insert Grade	MEGACOAT		
	PR1210	**PR1225**	**PR1230**
Insert Color			

● **CVD** Coated Carbide and **PVD** Coated Carbide

Insert Grade	CVD Coated Carbide					PVD Coated Carbide							
	CA45 Series	**CA4010**	**CA41** Series	**CA55** Series	**CA65** Series	**PR660**	**PR730**	**PR830**	**PR915**	**PR930**	**PR10** Series	**PR11** Series	**PR905**
Insert Color													

● Ceramic

Insert Grade	Alumina Ceramic		Silicon Nitride Ceramic	Cell Fiber Ceramic	MEGACOAT Ceramic	PVD Coated Ceramic
	KA30	**A65**	**KS6000**	**CF1**	**PT600M**	**A66N**
Insert Color						

● **CBN** and **PCD**

Insert Grade	CBN			PCD			MEGACOAT CBN	PVD Coated CBN
	KBN65B	**KBN510**	**KBN525**	**KPD001**	**KPD010**	**KPD230**	**KBN••M**	**KBN900**
Insert Color	CBN•PCD							

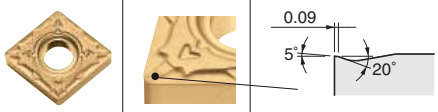
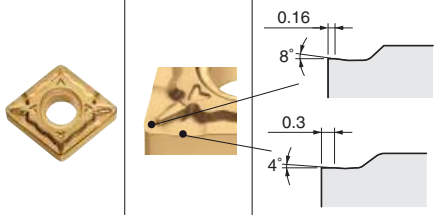
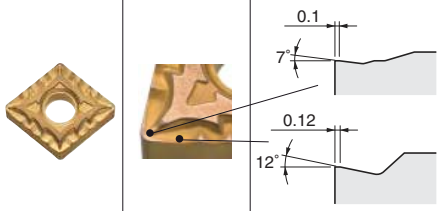
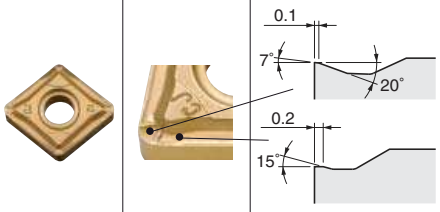
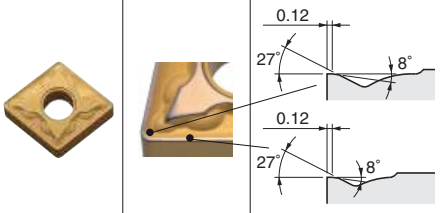
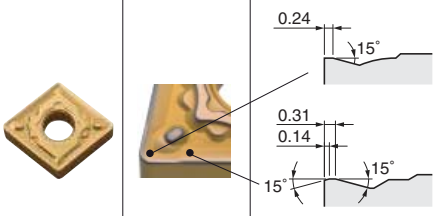
● Carbide

Insert Grade	Carbide			
	GW15	**GW25**	**KW10**	**PW30**
Insert Color				

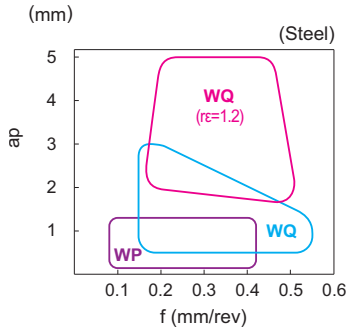
Chipbreaker Selection (Negative Insert)

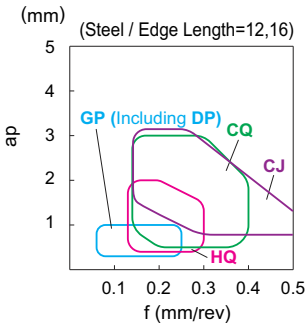
Steel

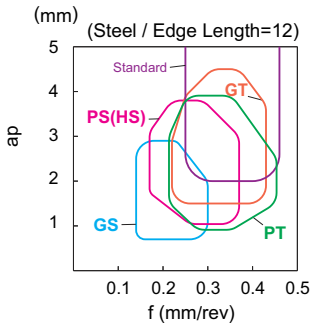
1 Molded Chipbreaker

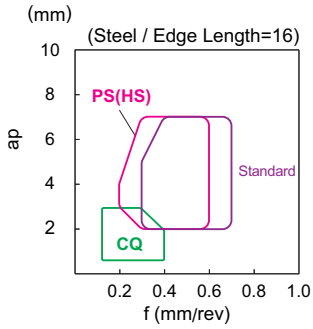
Cutting Range	Name	Design	Advantages
Finishing (With Wiper Edge)	WP		Wiper Insert. Double feed rate is available at finishing to light cutting, while maintaining a smooth finish.
Finishing-Medium (With Wiper Edge)	WQ		Wiper Insert. Double feed rate possible while maintaining a smooth finish. High efficiency and good chip control.
Finishing	GP		Finishing to light cutting. Good chip control.
Finishing-Medium	HQ		Sharp cutting performance and wide range chip control with 3-D rake angle and double projection design.
Finishing-Medium	CQ		Good chip control at varied ap such as copying. Applicable to up facing.
Finishing-Medium (Up Facing)	CJ		Improved chip curing at small cutting and high feed rate machining. Improved chip evacuation at copying and up facing.
Medium-Roughing	GS		Strong edge chipbreaker. Stable at continuous machining and light interrupted cutting.
Medium-Roughing	CS		Strong edge chipbreaker for general purpose machining. Stable at continuous machining and light interrupted cutting.

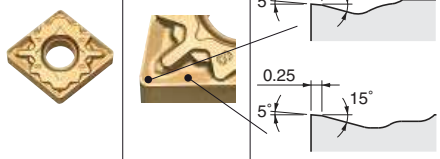
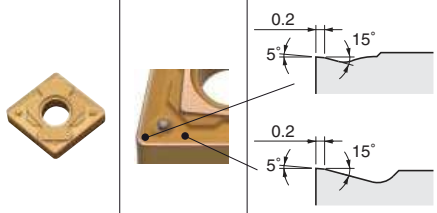
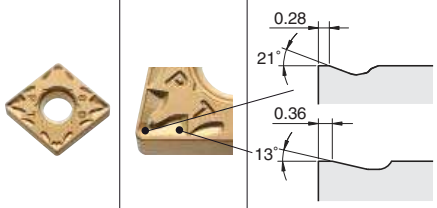
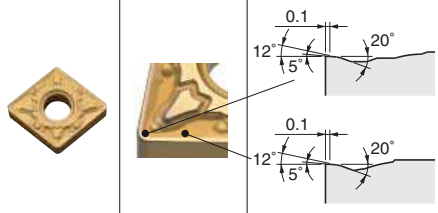
● Applicable Chipbreaker Range

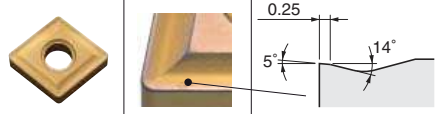
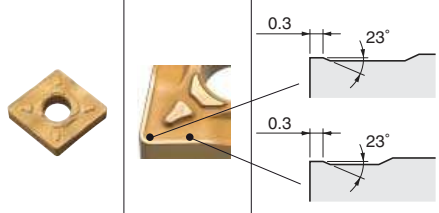
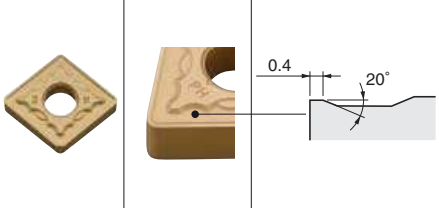
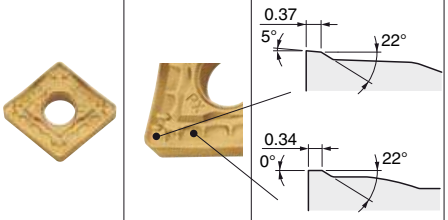




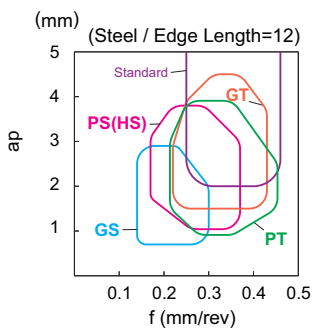


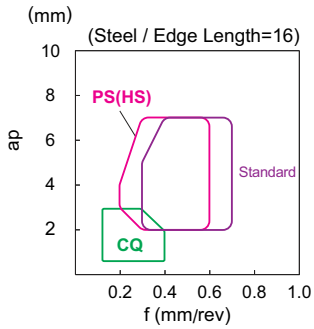


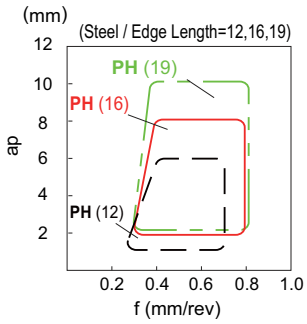
Cutting Range	Name	Design	Advantages
Medium-Roughing	PS		General purpose with wide application range. More stable due to large contact surface.
Medium-Roughing	HS		General purpose chipbreaker. Applicable to copying.
Medium-Roughing (High Feed)	PT		Low cutting force at high feed machining. Land support structure.
Medium-Roughing (High Feed)	GT		Strong edge chipbreaker. Wide land design and smooth chip control even at high feed rate machining.

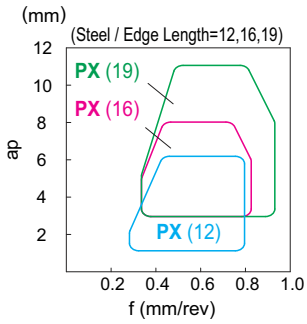
Cutting Range	Name	Design	Advantages
Roughing	Conventional (No Indication)		Low cutting force and suitable for large ap roughing.
Medium-Roughing (High Feed)	HT		Low cutting force at high feed rate machining. Strong edge and applicable to interrupted cutting.
Roughing	PH		For roughing of steel. Suitable for heavy interrupted cutting and for workpieces with scale due to strong cutting edge.
Single Sided Roughing (High Feed)	PX		Roughing and high feed rate operation. Low cutting force chipbreaker.

● Applicable Chipbreaker Range



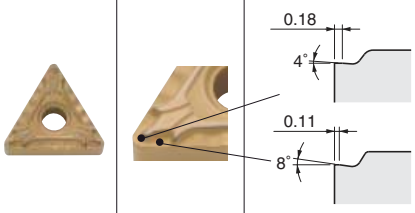
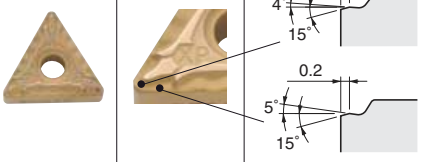


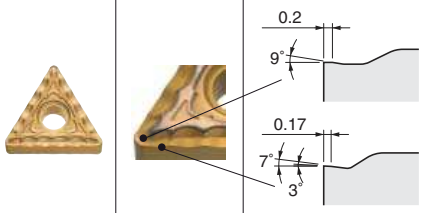
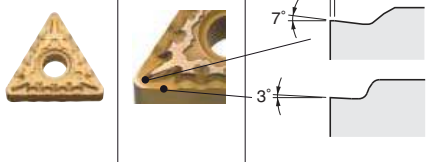




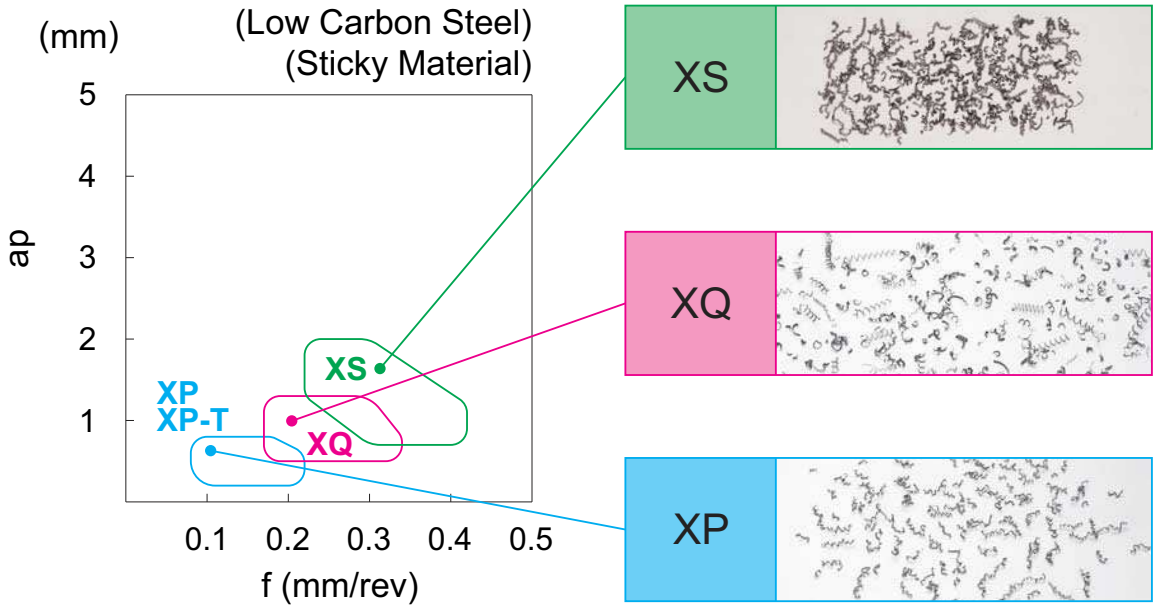
Chipbreaker Selection (Negative Insert)

Low Carbon Steel / Sticky Material

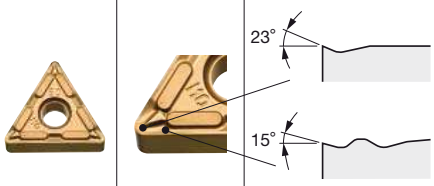
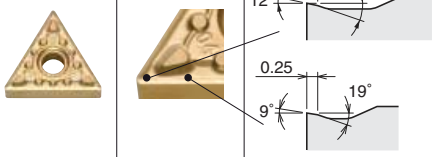
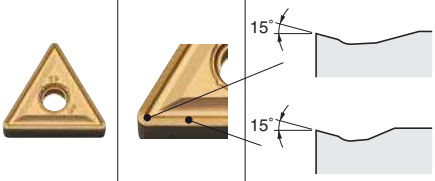
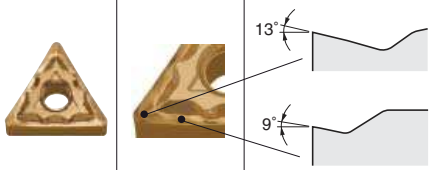
Cutting Range	Name	Design	Advantages
Finishing	XP		Consistent chip breaking performance when machining sticky materials.
Finishing	XP-T		Tough edge type of XP chipbreaker for finishing. Recommended for interrupted cutting and unstable finishing machining.

Cutting Range	Name	Design	Advantages
Medium	XQ		Consistent chip breaking at medium cutting due to moderate rake face and special design.
Roughing	XS		Consistent chip breaking when roughing due to special rake face and rake angle design.

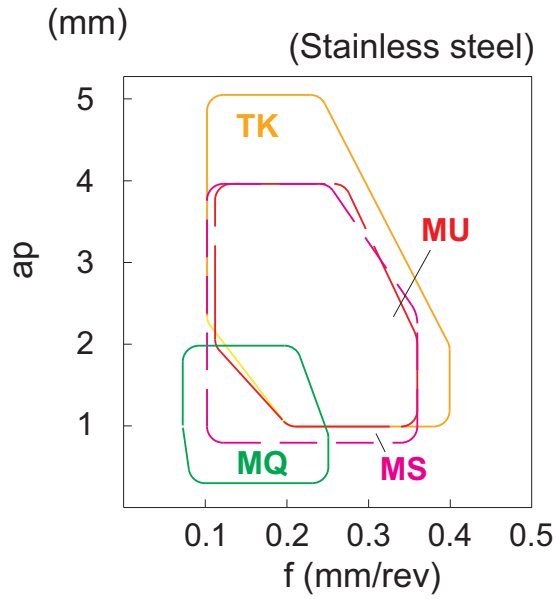
● Applicable Chipbreaker Range

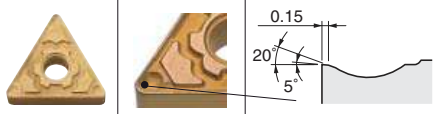
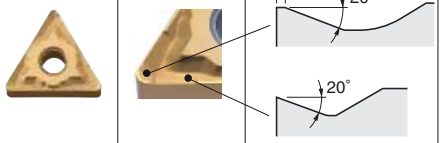
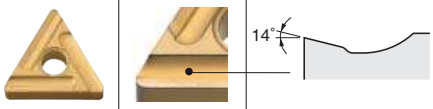


Stainless Steel

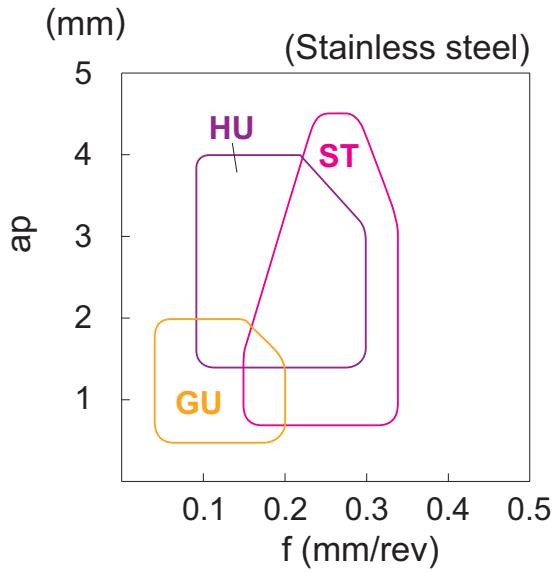
Cutting Range	Name	Design	Advantages
Finishing	MQ		Large rake angle and circular edge line. Low cutting force and good chip control.
Medium-Roughing	MS		Superior cutting edge sharpness and strength achieved by a positive land. Extra strength of cutting edge inhibits damage from wall shouldering.
Medium-Roughing	MU		Large rake angle reduces cutting force. Less burring achieved by diminishing damage from notching.
Medium-Roughing	TK		Smooth chip-breaker geometry improves chip flow with less adhesion. Large curled chips.

● Applicable Chipbreaker Range



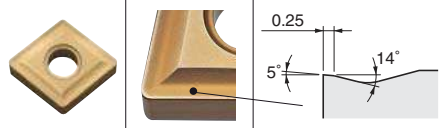
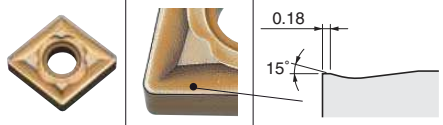
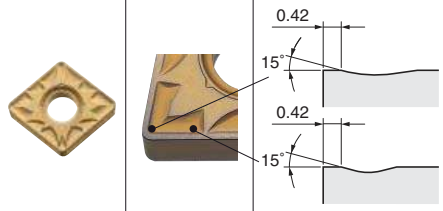
Cutting Range	Name	Design	Advantages
Finishing	GU		Sharp cutting performance and low cutting force due to 3-D rake angle. Applicable to small shaft machining.
Medium-Roughing	HU		Sharp cutting performance and strong edge due to 3-D rake angle. Applicable to small shaft machining.
Medium-Roughing	ST		Less cutting force due to large rake angle. Less notching by special design.

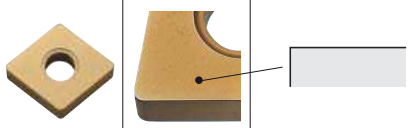
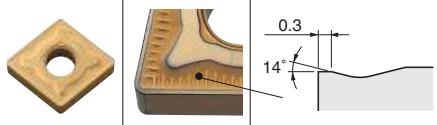
● Applicable Chipbreaker Range



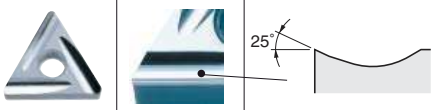
Chipbreaker Selection (Negative Insert)

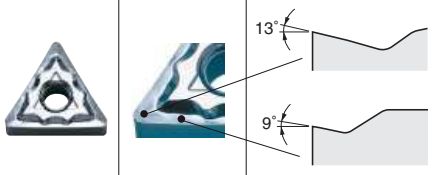
Cast Iron

Cutting Range	Name	Design	Advantages
Sharp Cutting Oriented	Standard		Standard chipbreaker for continuous to light interrupted machining of cast iron. (Low cutting force)
	C		High feed rate chipbreaker for continuous to light interrupted machining of cast iron.
	ZS		Standard chipbreaker for light interrupted to interrupted machining of cast iron. (High stability)

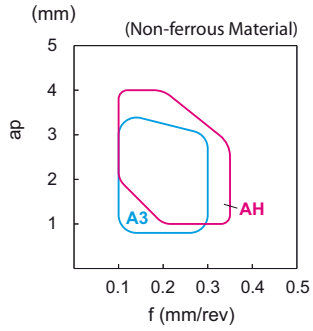
Cutting Range	Name	Design	Advantages
Stability Oriented	No Chipbreaker		High feed rate chipbreaker for light interrupted machining of cast iron.
	GC		Chipbreaker for heavy interrupted machininng of cast iron.

Non-ferrous Materials

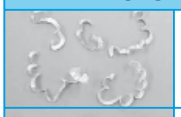
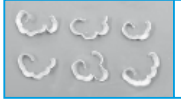
Cutting Range	Name	Design	Advantages
Finishing-Medium	A3		Large rake angle and smooth surface. Good chip control and less adhesion.

Cutting Range	Name	Design	Advantages
Medium-Roughing	AH	 G Class: Sharp Edge Prep. M Class: Horning Edge Prep.	Polished chipbreaker. Smooth chip control and less adhesion.

Applicable Chipbreaker Range



A3 Chipbreaker

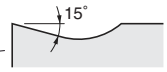
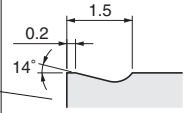
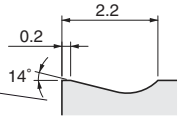
	ap=2mm f=0.2mm/rev
	ap=2mm f=0.3mm/rev

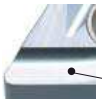
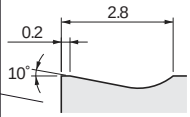
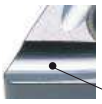
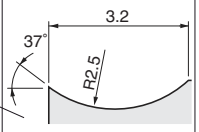
AH Chipbreaker

	ap=2mm f=0.2mm/rev
	ap=2mm f=0.3mm/rev

Steel

2 Ground Chipbreaker

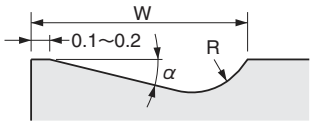
Cutting Range	Name	Design			Advantages
Finishing	S				Sharp edge and less cutting force. Good chip control and smooth chip evacuation.
Finishing-Medium	B				Suitable for general purpose machining at feed rate 0.15 to 0.25mm/rev.
Medium-Roughing	C				Suitable for general purpose machining at feed rate 0.20 to 0.35mm/rev.

Cutting Range	Name	Design			Advantages
Roughing	D				Suitable for general purpose machining at feed rate 0.30 to 0.45mm/rev.
Medium-Roughing / Low Cutting Resistance	25R				Applicable to sticky material such as low carbon steel. Large rake angle and suitable for stainless steel.

● Effectiveness of ground chipbreaker

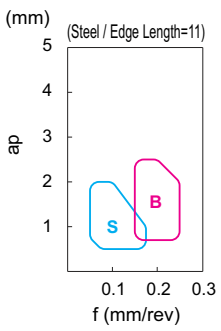
① Lower cutting force and improve edge
② Improved adhesion resistance
③ Improved dimension accuracy and finishing surface accuracy
④ Controlled chip evacuation direction

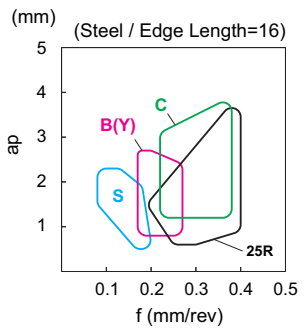
● Specification of **B, C, D** and Parallel ground chipbreaker

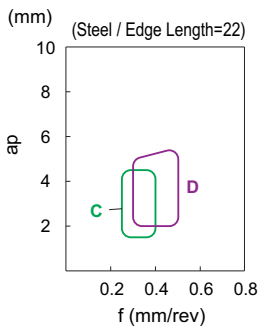


Insert Type	Size	Chipbreaker Name	W	α	R
CNGG	09,12	Without Indication (Similar to C)	2.2	14°	1.0
WNGG	06	Without Indication (Similar to C)	2.2	14°	1.0
TNGG	11,16	B	1.5	14°	0.5
	16,22	C	2.2	14°	1.0
	16,22	D	2.8	10°	1.5
DNGG	11,15	Without Indication (Similar to C)	2.5	14°	2.0
VNGG	16	Without Indication (Similar to B)	1.5	14°	0.5
SNGG	09,12	B	1.5	14°	0.5
	12	C	2.2	14°	1.0

● Applicable Chipbreaker Range

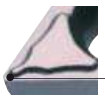
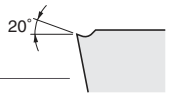
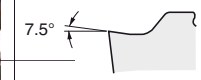
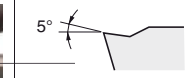
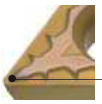
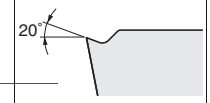
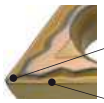
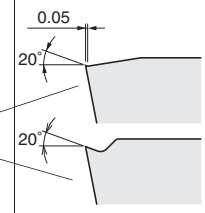
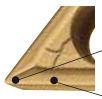
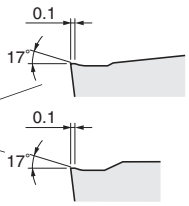


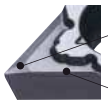
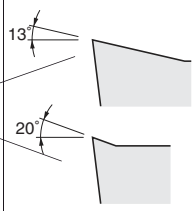
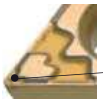
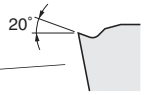
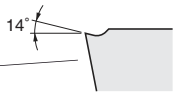
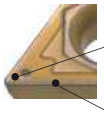
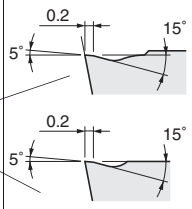
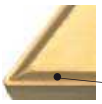
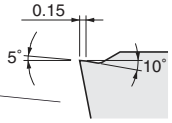
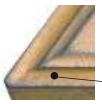
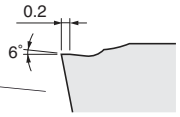




Steel

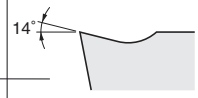
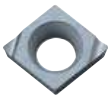
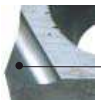
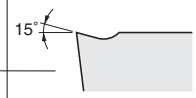
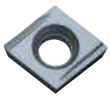
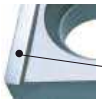
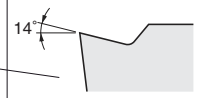
1 Molded Chipbreaker

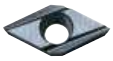
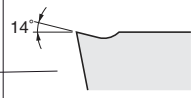
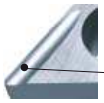
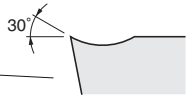
Cutting Range	Name	Design			Advantages
Minute ap	CF				Available for minute ap (0.02 to 0.2mm) finishing.
Finishing	GF				Dot located close to ridge line of cutting edge on corner. Chips fragmented in small pieces in cutting of small ap.
Finishing-Medium	GQ				Enables cutting over a wide range of conditions by using the optimum chipbreaker width according to the cutting depth.
Finishing	XP				Wide chip control range and sharp cutting performance. Suitable for low carbon steel and sticky material.
Finishing-Medium	XQ				Wide chip control range and sharp cutting performance. Suitable for low carbon steel and sticky material.
Finishing-Medium	GK				Good chip evacuation at wide range by breaker dot and wide chip pocket.

Cutting Range	Name	Design			Advantages
Finishing	CK				Good cutting performance. Applicable without hand for two direction cutting on automatic lathe.
Finishing	GP				Good chip control at finishing. Applicable to sticky material like low carbon steel, pipe material.
Finishing	DP				Consistent chip breaking performance for finishing.
Finishing-Medium	HQ				General purpose chipbreaker for medium cutting.
Medium	G				Chipbreaker for short chips at medium cutting.
Medium	Standard (Without Indication)				Strong edge chipbreaker for medium cutting range.

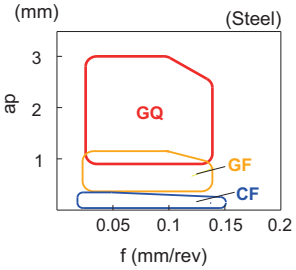
Steel

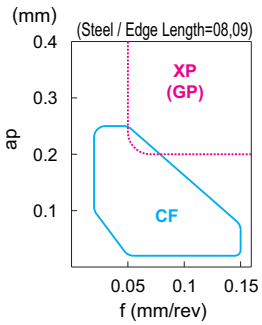
2 Ground Chipbreaker

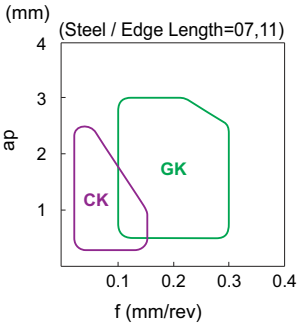
Cutting Range	Name	Design			Advantages
Finishing	Lead (Without Symbol)				Good chip control at finishing to light cutting with low cutting force.
Finishing	F				Good chip control at finishing to light cutting with low cutting force.
Medium	Y				Sharp cutting performance and good surface finish.

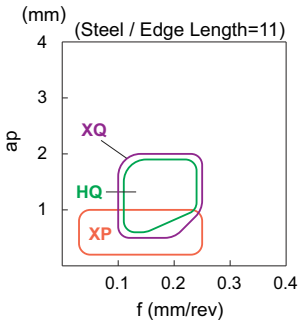
Cutting Range	Name	Design			Advantages
Low Feed	J				Slant chip-breaker width and chip control at various ap. Suitable for automatic lathes.
Low Feed	U				Good chip control at low feed rate and varied ap with low cutting force.

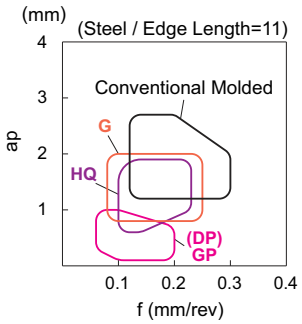
Applicable Chipbreaker Range

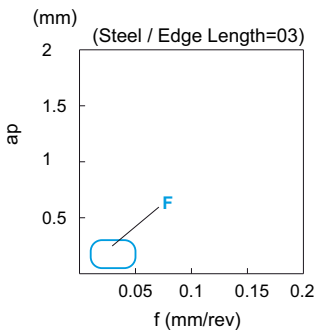


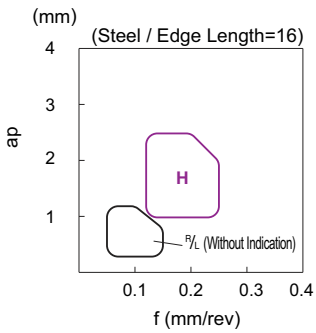


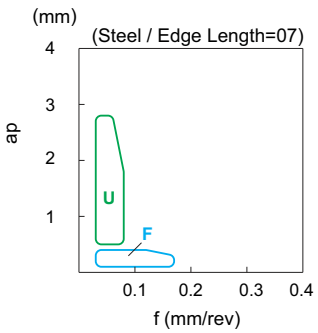


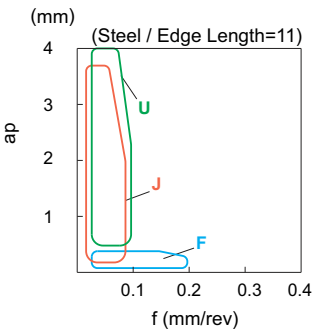






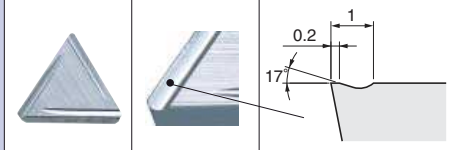
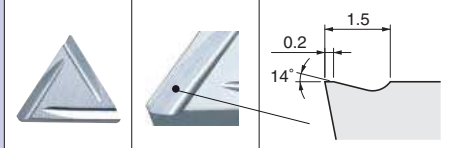


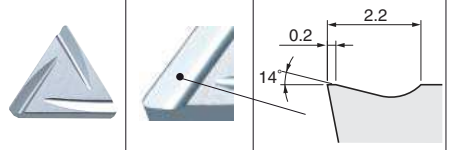
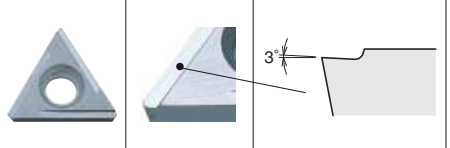




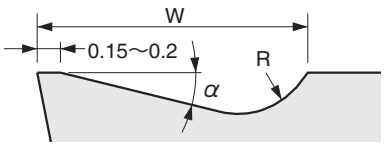
Steel

2 Ground Chipbreaker

Cutting Range	Name	Design	Advantages
Finishing	A		Large rake angle and low cutting force. Narrow chip-breaker width and consistent chip control.
Finishing-Medium	B		General purpose for light cutting range. Good balance between chip control and sharp cutting.

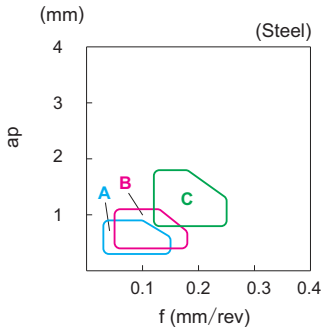
Cutting Range	Name	Design	Advantages
Medium cutting	C		Applicable to high load cutting. Good chip flow and less resistance.
Medium cutting	H		Sharp cutting performance and small curled chips.

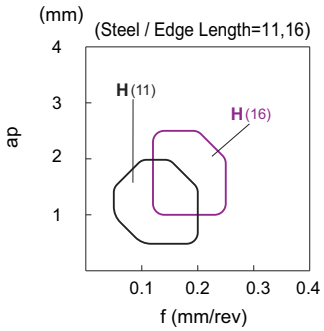
● Specification of **A, B, C** and Parallel ground chipbreaker



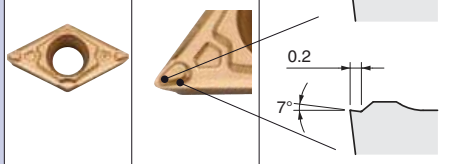
Insert Type	Size	Chipbreaker Name	W	α	R
TPGR	11	A	1.0	17°	0.5
	11,16	B	1.5	14°	0.5
	16	C	2.2	14°	1.0
SPGR	09	Without Indication (Similar to B)	1.5	14°	0.5
	12	Without Indication (Similar to C)	2.2	14°	1.0

● Applicable Chipbreaker Range

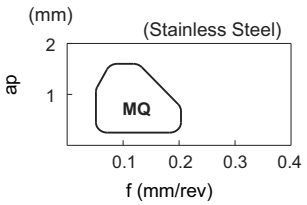




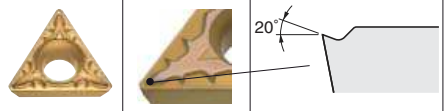
Stainless Steel

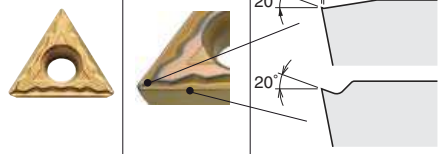
Cutting Range	Name	Design	Advantages
Finishing	MQ		Good chip evacuation at internal turning. Small curled chips. Prevents chip entanglement with toolholder and stabilizes surface roughness.

● Applicable Chipbreaker Range

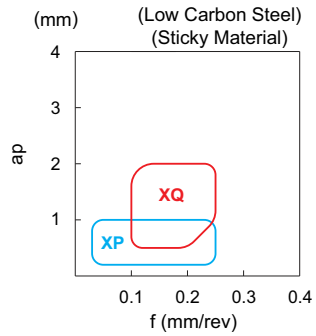


Low Carbon Steel / Sticky Material

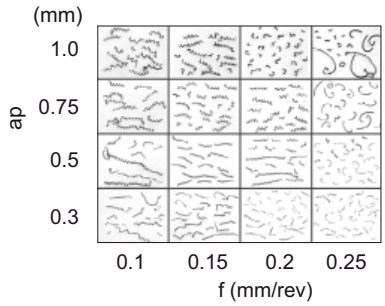
Cutting Range	Name	Design	Advantages
Finishing	XP		Consistent chip breaking performance even for low carbon steel and sticky material.

Cutting Range	Name	Design	Advantages
Finishing-Medium	XQ		Wide chip control range and sharp cutting performance. Applicable to low carbon steel and sticky material.

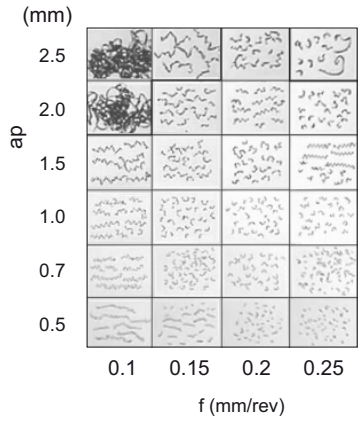
● Applicable Chipbreaker Range



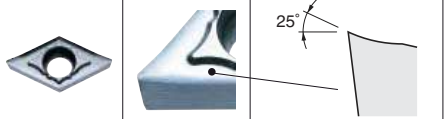
XP Chipbreaker

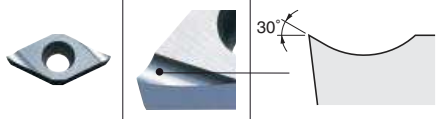


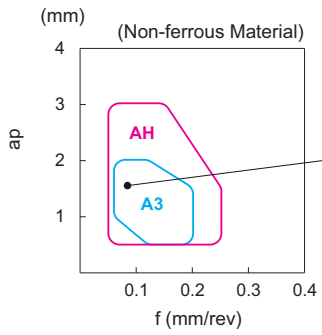
XQ Chipbreaker



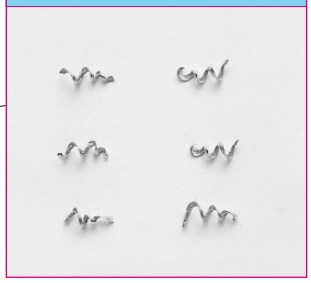
Non-ferrous Materials

Cutting Range	Name	Design	Advantages
Finishing-Medium	AH		Positive chip groove and good chip control with low cutting force. Polished surface reduces adhesion.

Cutting Range	Name	Design	Advantages
Finishing-Medium	A3		Large rake angle, smooth chip flow and less adhesion. Sharp edge and good surface finish.



AH Chipbreaker



Turning Indexable Inserts

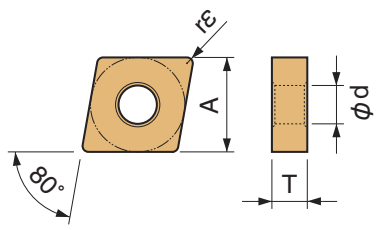
80°Diamond • Negative with Hole

(mm)

Description	A	T	ød
CN_0903_	9.525	3.18	3.81
CN_1204_	12.70	4.76	5.16

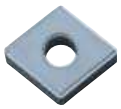
(mm)

Description	A	T	ød
CN_1204_	12.70	4.76	5.16
CN_1606_	15.875	6.35	6.35
CN_1906_	19.05	6.35	7.94

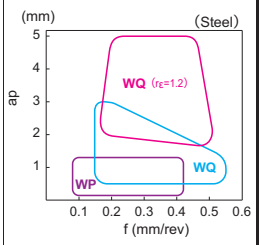


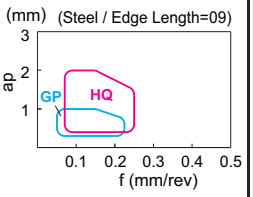
		TN6010	TN6020	TN60	PV7005	PV7010	PV7020	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PR930	PR1005	PR1025	PR1125	KW10
P	Free-cutting steel	●	○			●	○	○	●	✖	✖												
	Carbon Steel and Alloy Steel																						
M	Stainless Steel											●	◕									◔	
K	Gray Cast Iron						✖							✖									
	Nodular Cast Iron						◔																
N	Non-ferrous Metals																						
S	Heat-resistant alloy											○	◔									◔	
	Titanium Alloy																						
H	Hard Materials																						

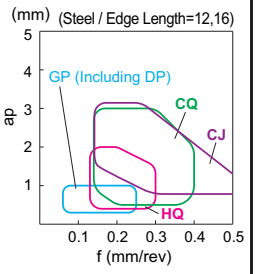
Classification of usage
✖: Interruption / 1st Choice
✖: Interruption / 2nd Choice
◕: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

	Insert	Description	Dim. (mm) rε	TN6010	TN6020	TN60	PV7005	PV7010	PV7020	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PR930	PR1005	PR1025	PR1125	KW10	Ref. Page for Toolholder
Finishing	With Wiper Edge	CNMG 120404WP	0.4		●			●	●	●	●	●														D8 F42 F66
		CNMG 120408WP	0.8		●			●	●	●	●	●														
Finishing-Medium	With Wiper Edge	CNMG 120404WQ	0.4		●	●		●	●	●	●	●														
		CNMG 120408WQ	0.8		●	●		●	●	●	●	●				●			○	○						
		CNMG 120412WQ	1.2		●	●			●	●	●	●				●			○	○						
Finishing		CNGG 120404DP	0.4			●																				
		CNGG 120408DP	0.8			●																				
Finishing		CNMG 090404GP	0.4			●					●	●														D8 F66
		CNMG 090408GP	0.8			●					●	●														
		CNMG 120402GP	0.2		●	●		●	●		●	●														D8 F42 F66
		CNMG 120404GP	0.4	●	●	●		●	●	●	●	●														
		CNMG 120408GP	0.8		●	●		●	●	●	●	●														
Finishing-Medium		CNGG 120408HQ	0.8								●	●														
		CNGG 120412HQ	1.2								●	●														
		CNMG 090304HQ	0.4			●																				-
		CNMG 090308HQ	0.8			●																				
		CNMG 090404HQ	0.4			●					●	●														D8 F66
		CNMG 090408HQ	0.8			●					●	●														
		CNMG 120404HQ	0.4	●	●	●		●	●	●	●	●	●	●	●									●		D8 F42 F66
		CNMG 120408HQ	0.8	●	●	●		●	●	●	●	●	●	●	●									●		
		CNMG 120412HQ	1.2			●				●	●	●	●	●	●									●		
Finishing-Medium / Up Facing		CNMG 120404CQ	0.4	●	●			●	●	●	●	●	●													
		CNMG 120408CQ	0.8	●	●	●		●	●	●	●	●	●													
		CNMG 120412CQ	1.2			●				●	●	●	●													
		CNMG 160608CQ	0.8								●	●														D8
		CNMG 160612CQ	1.2								●	●														
		CNMG 120408CJ	0.8							●	●	●	●													D8 F42 F66
		CNMG 120412CJ	1.2							●	●	●	●													
		CNMG 160612CJ	1.2							●	●	●	●													D8
		CNMG 160616CJ	1.6							●	●	●	●													
Finishing-Medium		CNMP 120404TK	0.4		●				●		●	●								●						D8 F42 F66
		CNMP 120408TK	0.8		●				●		●	●								●						

Applicable Chipbreaker Range







For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B40

Inserts are sold in 10 piece boxes.

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

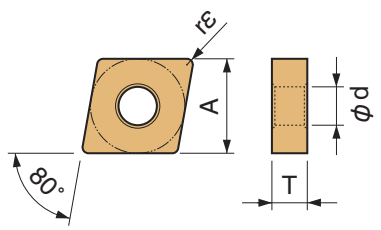
80°Diamond • Negative with Hole

(mm)

Description	A	T	ød
CN_0903_	9.525	3.18	3.81
CN_1204_	12.70	4.76	5.16

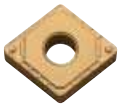
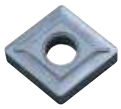
(mm)

Description	A	T	ød
CN_1204_	12.70	4.76	5.16
CN_1606_	15.875	6.35	6.35
CN_1906_	19.05	6.35	7.94

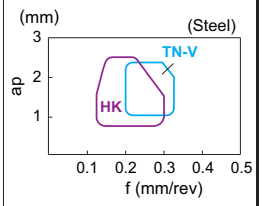


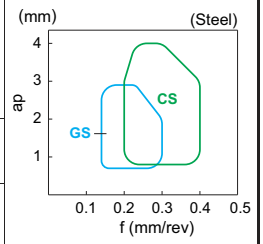
		TN6010	TN6020	TN60	PV7005	PV7010	PV7020	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PR930	PR1005	PR1025	PR1125	KW10
P	Free-cutting steel																						
P	Carbon Steel and Alloy Steel	●	○		●	○	○	●	✖	✖													
M	Stainless Steel											●	◓								◔		
K	Gray Cast Iron				●		✖																
K	Nodular Cast Iron						◔								●	✖							
N	Non-ferrous Metals																						
S	Heat-resistant alloy											○	◔								◔		
S	Titanium Alloy																						
H	Hard Materials																						

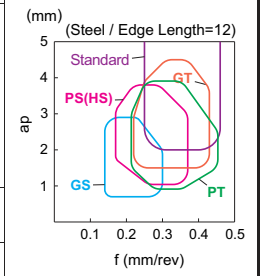
Classification of usage
✖: Interruption / 1st Choice
✖: Interruption / 2nd Choice
◓: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

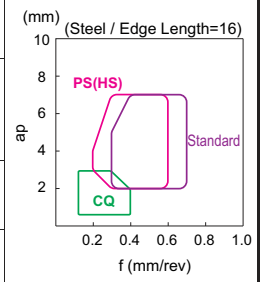
Insert	Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder
Medium 	CNMG 120404HK	0.4			●																				D8 F42 F66
	CNMG 120408HK	0.8			●																				
Medium 	CNMG 120404TN-V	0.4			●																				
	CNMG 120408TN-V	0.8			●																				
Medium-Roughing	CNMG 120404CS	0.4								●	●														
	CNMG 120408CS	0.8								●	●														
	CNMG 120412CS	1.2								●	●														
Medium-Roughing	CNMG 090304GS	0.4									●														-
	CNMG 090308GS	0.8									●														
	CNMG 090404GS	0.4			●					●	●														D8 F66
	CNMG 090408GS	0.8			●					●	●														
	CNMG 120404GS	0.4						●		●	●														D8 F42 F66
	CNMG 120408GS	0.8						●		●	●														
	CNMG 120412GS	1.2						●		●	●														
Medium-Roughing	CNMG 120404PS	0.4	●				●		●	●	●	●	●									●			
	CNMG 120408PS	0.8	●				●		●	●	●	●	●									●			
	CNMG 120412PS	1.2							●	●	●	●	●									●			
	CNMG 120416PS	1.6								●	●	●	●												
	CNMG 160612PS	1.2							●	●	●	●	●												D8
	CNMG 160616PS	1.6							●	●	●	●	●												
Medium-Roughing	CNMG 120404HS	0.4		●	●			●		●	●														D8 F42 F66
	CNMG 120408HS	0.8		●	●			●		●	●														
	CNMG 120412HS	1.2		●	●			●		●	●														
	CNMG 120416HS	1.6			●					●	●														
	CNMG 160612HS	1.2								●	●				●	●									D8
	CNMG 160616HS	1.6									●				●	●									
	CNMG 190612HS	1.2									●														
Medium-Roughing High Feed	CNMG 120408PT	0.8							●	●	●	●	●	●											D8 F42 F66
	CNMG 120412PT	1.2							●	●	●	●	●	●											
	CNMG 160608PT	0.8							●	●	●	●	●	●											D8
	CNMG 160612PT	1.2							●	●	●	●	●	●											
	CNMG 160616PT	1.6							●	●	●	●	●	●											
Medium-Roughing High Feed	CNMG 120408GT	0.8						●		●	●														D8 F42 F66
	CNMG 120412GT	1.2						●		●	●														
	CNMG 190612GT	1.2									●														D8
Medium-Roughing High Feed	CNMG 120408HT	0.8			●					●	●														D8 F42 F66
	CNMG 120412HT	1.2			●					●	●														

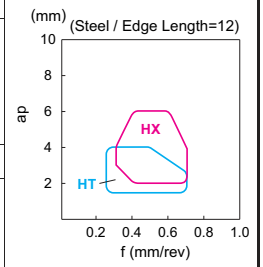
Applicable Chipbreaker Range











For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B40

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

Turning Indexable Inserts

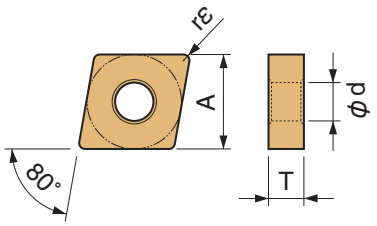
80°Diamond • Negative with Hole

(mm)

Description	A	T	ød
CN_0903_	9.525	3.18	3.81
CN_1204_	12.70	4.76	5.16

(mm)

Description	A	T	ød
CN_1204_	12.70	4.76	5.16
CN_1606_	15.875	6.35	6.35
CN_1906_	19.05	6.35	7.94

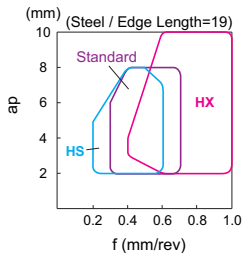


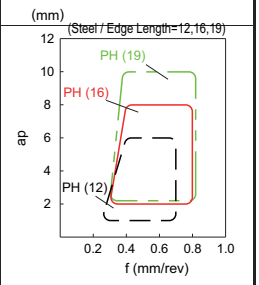
		TN6010	TN6020	TN60	PV7005	PV7010	PV7020	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PR930	PR1005	PR1025	PR1125	KW10
P	Free-cutting steel																						
P	Carbon Steel and Alloy Steel		○			●	○	○	●	✖	✖												
M	Stainless Steel											●	◓									◔	
K	Gray Cast Iron						✖							✖									
K	Nodular Cast Iron						◔								●	✖							
N	Non-ferrous Metals																						
S	Heat-resistant alloy											○	◔									◔	
S	Titanium Alloy																						
H	Hard Materials																						

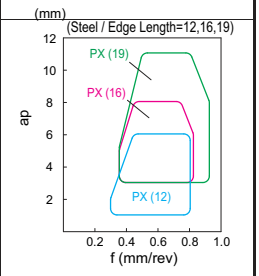
Classification of usage
✖: Interruption / 1st Choice
✖: Interruption / 2nd Choice
◓: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

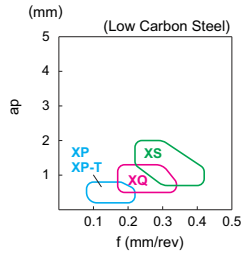
	Insert	Description	Dim. (mm) rε	TN6010	TN6020	TN60	PV7005	PV7010	PV7020	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PR930	PR1005	PR1025	PR1125	KW10	Ref. Page for Toolholder
Roughing		CNMG 120404	0.4		●	●	●			●	●	●		●	●	●	●	●	○	○				●		D8
		CNMG 120408	0.8		●	●	●			●	●	●	●	●	●	●	●	●	○	○				●		F42
		CNMG 120412	1.2			●	●			●	●	●	●	●	●	●	●	●	○	○				●		F66
		CNMG 120416	1.6							●		●				●	●	●	○	○				●		
		CNMG 160608	0.8							●	●	●														
		CNMG 160612	1.2							●	●	●	●			●				○						
		CNMG 160616	1.6							●	●	●	●			●				○						
		CNMG 190608	0.8							●	●						●	●	○	○						D8
		CNMG 190612	1.2							●	●	●	●				●	●	○	○						
		CNMG 190616	1.6							●	●	●	●				●	●	○	○						
		CNMG 190624	2.4								●															
Roughing		CNMG 120408PH	0.8								●	●	●													D8
		CNMG 120412PH	1.2								●	●	●													F42
		CNMG 120416PH	1.6								●	●	●													F66
		CNMG 160608PH	0.8								●	●														
		CNMG 160612PH	1.2								●	●	●													
		CNMG 160616PH	1.6								●	●														
		CNMG 190608PH	0.8								●	●														D8
		CNMG 190612PH	1.2								●	●	●													
		CNMG 190616PH	1.6								●	●	●													
		CNMG 190624PH	2.4								●	●														
Roughing	Single Sided / High Feed	CNMM 120408PX	0.8								●	●	●													D8
		CNMM 120412PX	1.2								●	●	●													F42
		CNMM 120416PX	1.6								●	●	●													F66
		CNMM 160608PX	0.8								●	●	●													
		CNMM 160612PX	1.2								●	●	●													
		CNMM 160616PX	1.6								●	●	●													
		CNMM 190608PX	0.8								●	●	●													D8
		CNMM 190612PX	1.2								●	●	●													
		CNMM 190616PX	1.6								●	●	●													
		CNMM 190624PX	2.4								●	●	●													
Low Carbon Steel	Finishing	CNMG 120404XP	0.4		●	●		●	●	●	●	●														
		CNMG 120408XP	0.8		●	●		●	●	●	●	●														
	Finishing / Tough Edge	CNMG 120404XP-T	0.4			●																				D8
		CNMG 120408XP-T	0.8			●																				F42
	Medium	CNMG 120404XQ	0.4		●	●		●	●	●	●	●														F66
		CNMG 120408XQ	0.8		●	●		●	●	●	●	●														
	Roughing	CNMG 120408XS	0.8		●	●			●	●	●	●														

Applicable Chipbreaker Range









For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B40

Inserts are sold in 10 piece boxes.

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

80°Diamond • Negative with Hole

(mm)

Description	A	T	ød
CN_0903_	9.525	3.18	3.81
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(mm)

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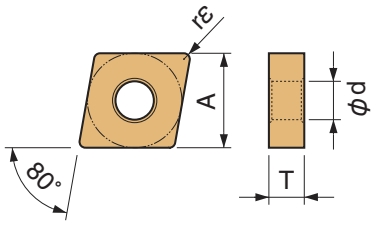
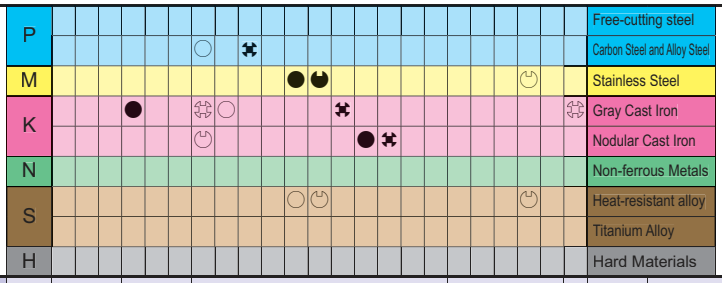
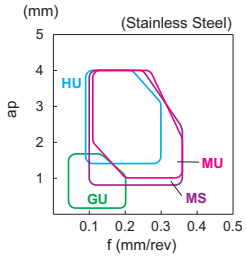
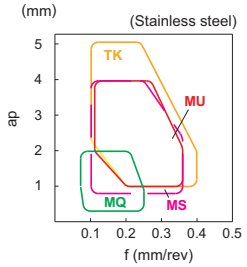
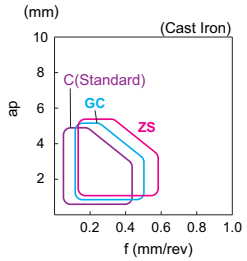




Classification of usage
✖: Interruption / 1st Choice
✖: Interruption / 2nd Choice
●: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

	Insert	Description		Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Stainless Steel	Finishing	CNMG	120404GU	0.4											●	●											D8 F42 F66	
			120408GU	0.8											●	●												
	Medium-Roughing	CNMG	120408HU	0.8									●		●	●												
			120412HU	1.2											●	●												
	Finishing-Medium	CNMG	120404MQ	0.4											●	●									●			
			120408MQ	0.8											●	●									●			
	Medium-Roughing	CNMG	120404MS	0.4											●	●									●			
			120408MS	0.8											●	●									●			
			120412MS	1.2											●	●									●			
			120416MS	1.6											●	●									●			
	Medium-Roughing	CNMG	120404MU	0.4											●	●									●			
			120408MU	0.8											●	●									●			
			120412MU	1.2											●	●									●			
		CNMG	160608MU	0.8											●	●									●			
			160612MU	1.2											●	●									●			
			160616MU	1.6											●	●									●			
	Medium-Roughing	CNMG	120404TK	0.4											●	●									●			
			120408TK	0.8											●	●									●			
Cast Iron	Roughing	CNMG	120404C	0.4							●							●	●	○	○							
			120408C	0.8							●							●	●	○	○							
			120412C	1.2							●							●	●	○	○							
			120416C	1.6							●							●	●	○	○							
		CNMG	160612C	1.2							●							●	●	○	○						D8	
	Roughing	CNMG	120408ZS	0.8							●						●	●	●	○	○						D8 F42 F66	
			120412ZS	1.2							●						●	●	●	○	○							
	Roughing	CNMG	120408GC	0.8							●	●					●	●	●	○	○							
			120412GC	1.2							●	●					●	●	●	○	○							
	Without Chipbreaker	CNGA	120404	0.4				●																		●		
			120408	0.8				●																		●		
		CNMA	120404	0.4							●	●					●	●	●	○	○					●		—
			120408	0.8							●	●					●	●	●	○	○					●		
			120412	1.2							●	●					●	●	●	○	○							
			120416	1.6							●	●					●	●	●	○	○							
		CNMA	160612	1.2								●					●										D8	

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B40

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

Turning Indexable Inserts

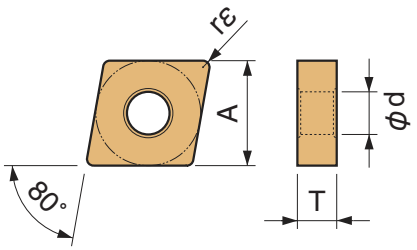
80°Diamond • Negative with Hole

(mm)

Description	A	T	ød
CN_0904_	9.525	4.76	3.81
CN_1204_	12.70	4.76	5.16

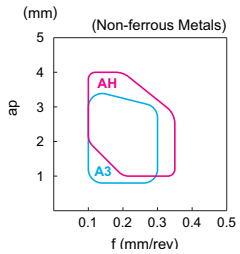
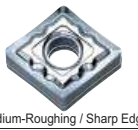
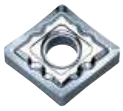
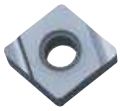
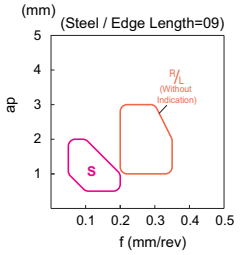
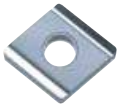
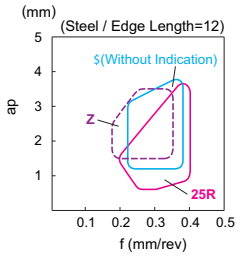
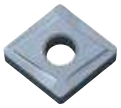
(mm)

Description	A	T	ød
CN_1606_	15.875	6.35	6.35
CN_1906_	19.05	6.35	7.94



P	Free-cutting steel	
	Carbon Steel and Alloy Steel	○
M	Stainless Steel	
K	Gray Cast Iron	✱
	Nodular Cast Iron	
N	Non-ferrous Metals	✱
S	Heat-resistant alloy	
	Titanium Alloy	✱
H	Hard Materials	

Classification of usage
✱: Interruption / 1st Choice
✱: Interruption / 2nd Choice
●: Light Interruption / 1st Choice
○: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

Insert (Handed Insert shows Right-hand)		Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Non-ferrous Metals	Finishing-Medium / Sharp Edge	CNGG 120404R/L-A3	0.4																						●	D8 F42 F66	
		CNGG 120408R/L-A3	0.8																						●		
	 Medium-Roughing / Sharp Edge	CNGG 120404AH	0.4																						●		
		CNGG 120408AH	0.8																						●		
	 Medium-Roughing / With Honing	CNMG 120404AH	0.4																						●		
		CNMG 120408AH	0.8																						●		
Finishing	 Surface Roughness Oriented	CNGG 090402R/L-S	0.2			●																			●	D8 F66	
		CNGG 090404R/L-S	0.4			●																			●		
		CNGG 090408R/L-S	0.8			●																			●		
Medium		CNGG 090404R/L	0.4			●																			●		
		CNGG 090408R/L	0.8			●																			●		
		CNGG 120404R/L	0.4		●	●																				D8 F42 F66	
		CNGG 120408R/L	0.8		●	●																					
Medium-Roughing	Low Cutting Force	CNGG 120404R/L-25R	0.4			●																			●		
		CNGG 120408R/L-25R	0.8			●																			●		
Medium-Roughing		CNGG 120404Z	0.4			●																					
		CNGG 120408Z	0.8			●																					

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B40

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

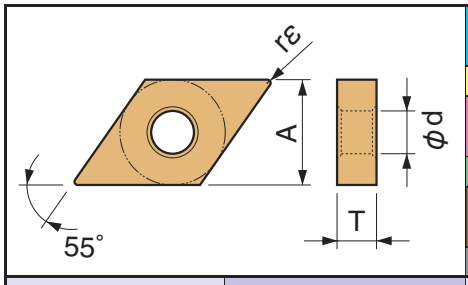
55°Diamond • Negative with Hole

(mm)

Description	A	T	ød
DN_1104_	9.525	4.76	3.81
DN_1504_	12.70	4.76	5.16

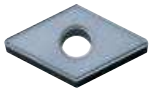
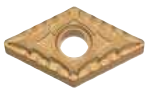
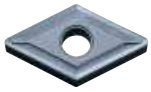
(mm)

Description	A	T	ød
DN_1506_	12.70	6.35	5.16



P	Free-cutting steel	● ○ ● ✖ ✖
	Carbon Steel and Alloy Steel	● ○ ○ ● ✖ ✖
M	Stainless Steel	● ◕ ◔
K	Gray Cast Iron	✖
	Nodular Cast Iron	◔
N	Non-ferrous Metals	
S	Heat-resistant alloy	○ ◔ ◔
	Titanium Alloy	
H	Hard Materials	

Classification of usage
✖: Interruption / 1st Choice
✖: Interruption / 2nd Choice
◕: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

	Insert	Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Finishing		DNGG 150404DP	0.4			●																				D10 D11 F43	
		DNGG 150408DP	0.8			●																					
Finishing		DNMG 110404GP	0.4			●					●	●														D11 F67	
		DNMG 110408GP	0.8			●					●	●															
		DNMG 150402GP	0.2	●	●	●		●	●		●	●														D10 D11 F43	(mm) (Steel / Edge Length=11) ap f (mm/rev) HQ GP
		DNMG 150404GP	0.4	●	●	●		●	●	●	●	●															
		DNMG 150408GP	0.8		●	●		●	●	●	●	●															
		DNMG 150602GP	0.2	●	●			●	●																		
		DNMG 150604GP	0.4	●	●			●	●																		
		DNMG 150608GP	0.8	●	●			●	●																		
Finishing-Medium		DNMG 110402HQ	0.2			●					●	●														D11 F67	
		DNMG 110404HQ	0.4			●					●	●															
		DNMG 150404HQ	0.4	●	●	●		●	●	●	●	●	●	●	●									●		D10 D11 F43	(mm) (Steel / Edge Length=15) ap f (mm/rev) GP (Including DP) HQ CQ CJ
		DNMG 150408HQ	0.8	●	●	●		●	●	●	●	●	●	●	●									●			
		DNMG 150412HQ	1.2		●	●			●	●	●	●	●														
		DNMG 150604HQ	0.4	●	●	●		●	●	●	●	●	●	●	●									●			
		DNMG 150608HQ	0.8	●	●	●		●	●	●	●	●	●	●	●									●			
		DNMG 150612HQ	1.2	●				●		●	●	●	●														
Finishing-Medium / Up Facing		DNMG 150404CQ	0.4	●	●	●			●	●	●	●	●														
		DNMG 150408CQ	0.8	●	●	●		●	●	●	●	●	●														
		DNMG 150412CQ	1.2		●	●			●	●	●	●	●														
		DNMG 150604CQ	0.4	●	●			●	●	●	●	●	●														
		DNMG 150608CQ	0.8		●				●	●	●	●	●														
		DNMG 150612CQ	1.2						●	●	●	●	●														
		DNMG 150408CJ	0.8							●	●	●	●													D10 D11 F43	
		DNMG 150412CJ	1.2							●	●	●	●														
		DNMG 150608CJ	0.8							●	●	●	●														
		DNMG 150612CJ	1.2							●	●	●	●														
Finishing-Medium		DNMP 150604TK	0.4		●				●		●	●									●						—
		DNMP 150608TK	0.8		●				●		●	●									●						
Medium cutting		DNMG 150404HK	0.4			●																					(mm) (Steel) ap f (mm/rev) TN-V HK
		DNMG 150408HK	0.8			●																					
Medium cutting		DNMG 150404TN-V	0.4			●																					
		DNMG 150408TN-V	0.8			●																					

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B41

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

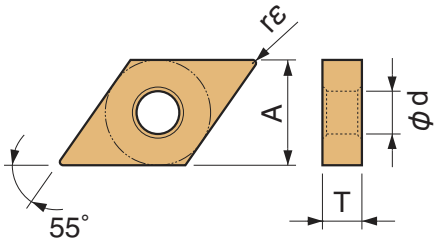
55°Diamond • Negative with Hole

(mm)

Description	A	T	ød
DN_1104_	9.525	4.76	3.81
DN_1504_	12.70	4.76	5.16

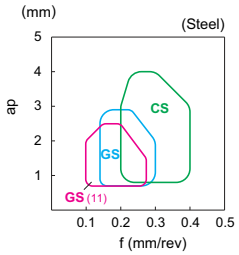
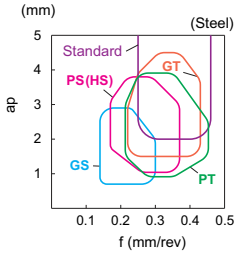
(mm)

Description	A	T	ød
DN_1506_	12.70	6.35	5.16



P	Free-cutting steel	● ○ ✖ ✖
	Carbon Steel and Alloy Steel	● ○ ○ ● ✖ ✖
M	Stainless Steel	● ◕ ◔
K	Gray Cast Iron	● ✖ ✖
	Nodular Cast Iron	◔ ● ✖
N	Non-ferrous Metals	
S	Heat-resistant alloy	○ ◔ ◔
	Titanium Alloy	
H	Hard Materials	

Classification of usage
✖: Interruption / 1st Choice
✖: Interruption / 2nd Choice
◕: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

Insert		Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Medium-Roughing		DNMG 150404CS	0.4								●	●														D10 D11 F43	
		150408CS	0.8								●	●															
		DNMG 150604CS	0.4								●	●															
		150608CS	0.8								●	●															
Medium-Roughing		DNMG 110404GS	0.4			●					●	●														D11 F67	
		110408GS	0.8			●					●	●															
		DNMG 150404GS	0.4						●		●	●														D10 D11 F43	
		150408GS	0.8						●		●	●															
		150412GS	1.2								●	●															
		DNMG 150604GS	0.4						●		●	●															
		150608GS	0.8						●		●	●															
		150612GS	1.2								●																
Medium-Roughing		DNMG 150404PS	0.4	●				●		●	●	●	●	●	●									●		D10 D11 F43	
		150408PS	0.8	●				●		●	●	●	●	●	●									●			
		150412PS	1.2							●	●	●	●	●	●												
		150416PS	1.6								●	●															
		DNMG 150604PS	0.4	●				●			●	●		●	●									●			
		150608PS	0.8	●				●		●	●	●	●	●	●									●			
		150612PS	1.2	●				●		●	●	●	●	●	●												
		150616PS	1.6								●	●															
Medium-Roughing		DNMG 150404HS	0.4		●	●			●		●	●															
		150408HS	0.8		●	●			●		●	●															
		150412HS	1.2		●	●			●		●	●															
		DNMG 150604HS	0.4		●	●			●		●	●															
		150608HS	0.8		●	●			●		●	●															
		150612HS	1.2			●					●	●															
Medium-Roughing	High Feed	DNMG 150408PT	0.8							●	●	●	●	●	●												
		150412PT	1.2							●	●	●	●	●	●												
		DNMG 150608PT	0.8							●	●	●	●	●	●												
		150612PT	1.2							●	●	●	●	●	●												
Medium-Roughing	High Feed	DNMG 150408GT	0.8								●	●															
		150412GT	1.2								●	●															
		DNMG 150608GT	0.8								●	●															
		150612GT	1.2								●	●															
Medium-Roughing	High Feed	DNMG 150408HT	0.8			●					●	●															
		150412HT	1.2			●					●	●															
		DNMG 150608HT	0.8								●	●															
		150612HT	1.2								●	●															
Roughing		DNMG 150404	0.4		●	●				●	●	●				●	●	●	○	○							
		150408	0.8		●	●	●			●	●	●	●			●	●	●	○	○							
		150412	1.2							●			●			●	●	●	○	○							
		DNMG 150604	0.4		●											●			○	○							
		150608	0.8		●		●			●	●	●	●			●	●	●	○	○							
		150612	1.2							●	●	●	●			●	●	●	○	○							

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B41

Inserts are sold in 10 piece boxes.

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

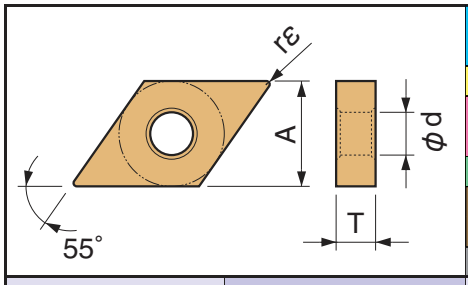
55°Diamond • Negative with Hole

(mm)

Description	A	T	ød
DN_1104_	9.525	4.76	3.81
DN_1504_	12.70	4.76	5.16

(mm)

Description	A	T	ød
DN_1506_	12.70	6.35	5.16



P	Free-cutting steel	
	Carbon Steel and Alloy Steel	○ ● ✖
M	Stainless Steel	
K	Gray Cast Iron	✥
	Nodular Cast Iron	◔
N	Non-ferrous Metals	
S	Heat-resistant alloy	
	Titanium Alloy	
H	Hard Materials	

Classification of usage
✖: Interruption / 1st Choice
✥: Interruption / 2nd Choice
◕: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

Insert		Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Roughing		DNMG 150408PH	0.8								●	●														D10 D11 F43	(mm) (Steel) ap f (mm/rev) PH PX
		DNMG 150412PH	1.2								●	●															
		DNMG 150416PH	1.6								●	●															
		DNMG 150608PH	0.8								●	●	●														
		DNMG 150612PH	1.2								●	●	●														
		DNMG 150616PH	1.6								●	●															
Single Sided / Roughing	High Feed	DNMM 150408PX	0.8								●	●	●														
		DNMM 150412PX	1.2								●	●	●														
		DNMM 150416PX	1.6								●	●	●														
		DNMM 150608PX	0.8								●	●	●														
		DNMM 150612PX	1.2								●	●	●														
		DNMM 150616PX	1.6								●	●	●														
Low Carbon Steel	Finishing	DNMG 150404XP	0.4		●	●		●	●	●	●	●															(mm) (Low Carbon Steel) (Sticky Material) ap f (mm/rev) XQ XP XP-T XS
		DNMG 150408XP	0.8		●	●		●	●	●	●	●															
		DNMG 150604XP	0.4			●		●	●																		
		DNMG 150608XP	0.8			●		●	●																		
	Finishing Tough Edge	DNMG 150404XP-T	0.4			●																					
		DNMG 150408XP-T	0.8			●																					
	Medium	DNMG 150404XQ	0.4		●	●		●	●	●	●	●															
		DNMG 150408XQ	0.8		●	●		●	●	●	●	●															
		DNMG 150604XQ	0.4			●		●	●																		
		DNMG 150608XQ	0.8			●		●	●		●	●															
	Roughing	DNMG 150408XS	0.8		●	●			●	●	●	●															
		DNMG 150608XS	0.8								●	●															

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B41

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

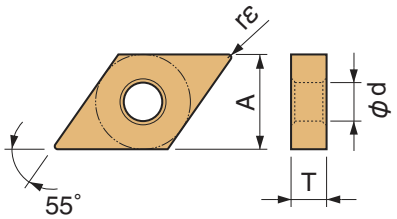
55°Diamond • Negative with Hole

(mm)

Description	A	T	ød
DN_1104_	9.525	4.76	3.81
DN_1504_	12.70	4.76	5.16

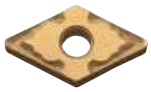
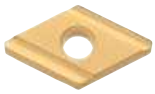
(mm)

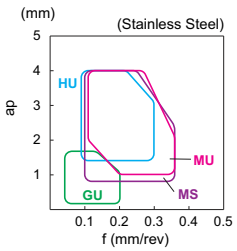
Description	A	T	ød
DN_1506_	12.70	6.35	5.16

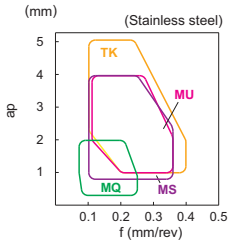


P																								Free-cutting steel
									●	✖														Carbon Steel and Alloy Steel
M												●	◓								◔			Stainless Steel
K																								Gray Cast Iron
																								Nodular Cast Iron
N																								Non-ferrous Metals
S												○	◔								◔			Heat-resistant alloy
																								Titanium Alloy
H																								Hard Materials

Classification of usage
✖: Interruption / 1st Choice
✖: Interruption / 2nd Choice
◓: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

	Insert (Handed Insert shows Right-hand)	Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Stainless Steel	Finishing	DNMG 150404GU	0.4											●	●											D10 D11 F43	
		DNMG 150408GU	0.8											●	●												
		DNMG 150604GU	0.4											●	●												
		DNMG 150608GU	0.8											●	●												
	 Medium-Roughing	DNMG 150408HU	0.8									●		●	●												
		DNMG 150412HU	1.2											●	●												
		DNMG 150608HU	0.8											●	●												
		DNMG 150612HU	1.2											●	●												
	Finishing-Medium	DNMG 150404MQ	0.4											●	●									●			
		DNMG 150408MQ	0.8											●	●									●			
		DNMG 150604MQ	0.4											●	●									●			
		DNMG 150608MQ	0.8											●	●									●			
	Medium-Roughing	DNMG 150404MS	0.4											●	●									●			
		DNMG 150408MS	0.8											●	●									●			
		DNMG 150412MS	1.2											●	●									●			
		DNMG 150604MS	0.4											●	●									●			
		DNMG 150608MS	0.8											●	●									●			
		DNMG 150612MS	1.2											●	●									●			
	Medium-Roughing	DNMG 150404MU	0.4											●	●									●			
		DNMG 150408MU	0.8											●	●									●			
		DNMG 150604MU	0.4											●	●									●			
		DNMG 150608MU	0.8											●	●									●			
	Medium-Roughing	DNMG 150404TK	0.4											●	●									●			
		DNMG 150408TK	0.8											●	●									●			
		DNMG 150604TK	0.4											●	●									●			
		DNMG 150608TK	0.8											●	●									●			
	 Medium-Roughing	DNMG 150604R/L-ST	0.4								●	●															
		DNMG 150608R/L-ST	0.8								●	●															





For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B41

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

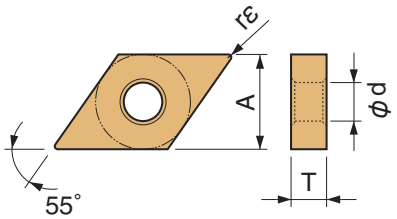
55°Diamond • Negative with Hole

(mm)

Description	A	T	ød
DN_1104_	9.525	4.76	3.81
DN_1504_	12.70	4.76	5.16

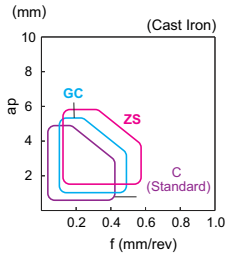
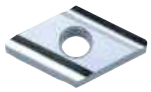
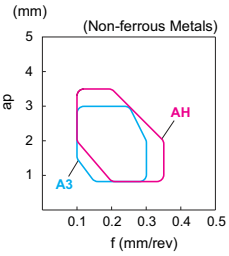
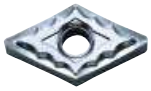
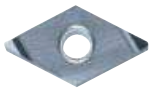
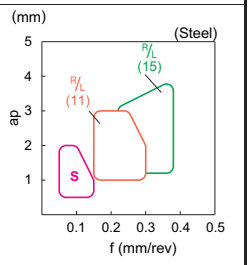
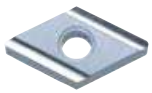
(mm)

Description	A	T	ød
DN_1506_	12.70	6.35	5.16



P																							Free-cutting steel
		○				○	○											◐					Carbon Steel and Alloy Steel
M																		◐					Stainless Steel
K				●			✠						✖									✠	Gray Cast Iron
							◐							●	✖								Nodular Cast Iron
N																						✖	Non-ferrous Metals
S																							Heat-resistant alloy
																						✖	Titanium Alloy
H																							Hard Materials

Classification of usage
✖: Interruption / 1st Choice
✠: Interruption / 2nd Choice
●: Light Interruption / 1st Choice
◐: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

	Insert (Handed Insert shows Right-hand)	Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Cast Iron	Roughing	DNMG 150404C	0.4														●	●	○	○						D10 D11 F43	
		DNMG 150408C	0.8														●	●	○	○							
		DNMG 150412C	1.2														●	●	○	○							
		DNMG 150604C	0.4																○	○							
		DNMG 150608C	0.8							●							●	●	○	○							
		DNMG 150612C	1.2							●							●	●	○	○							
	Roughing	DNMG 150408ZS	0.8							●						●	●	●	○	○							
		DNMG 150412ZS	1.2							●						●	●	●	○	○							
		DNMG 150608ZS	0.8							●							●	●	○	○							
		DNMG 150612ZS	1.2							●							●	●	○	○							
	Roughing	DNMG 150408GC	0.8							●						●	●	●	○	○							
		DNMG 150412GC	1.2							●							●	●		○							
		DNMG 150608GC	0.8							●	●					●	●	●	○	○							
		DNMG 150612GC	1.2							●	●					●	●	●		○							
	Without Chipbreaker	DNMA 150404	0.4							●							●	●	○	○					●		—
		DNMA 150408	0.8							●						●	●	●	○	○					●		
		DNMA 150604	0.4													●			○	○							
		DNMA 150608	0.8													●			○	○							
Non-ferrous Metals	 Finishing-Medium / Sharp Edge	DNGG 150404R/L-A3	0.4																						●		
		DNGG 150408R/L-A3	0.8																						●		
	 Medium-Roughing / Sharp Edge	DNGG 150404AH	0.4																						●		
		DNGG 150408AH	0.8																						●		
		DNGG 150604AH	0.4																						●		
		DNGG 150608AH	0.8																						●		
	Medium-Roughing / with Honing	DNMG 150404AH	0.4																						●		
		DNMG 150408AH	0.8																						●		
		DNMG 150604AH	0.4																						●		
		DNMG 150608AH	0.8																						●		
Finishing	 Surface Roughness Oriented	DNGG 110402R/L-S	0.2			●																			●	D11 F67	
		DNGG 110404R/L-S	0.4			●																			●		
		DNGG 110408R/L-S	0.8			●																			●		
Medium cutting		DNGG 110404R/L	0.4			●																			●		
		DNGG 110408R/L	0.8			●																			●		
		DNGG 150404R/L	0.4		●	●	●		●												●				●	D10 D11 F43	
		DNGG 150408R/L	0.8		●	●	●		●												●				●		

For grades (TN30 PV30 PV60 PV90 PR905 PR915), See Page B41

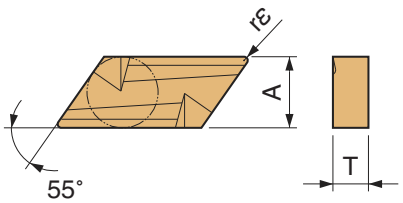
● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

55°Parallelogram • Negative without Hole

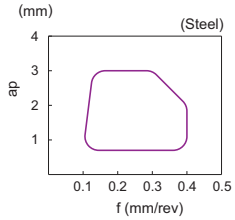
(mm)

Description	A	T	ød
KNMX1604_	9.525	4.76	-



P	Free-cutting steel
	Carbon Steel and Alloy Steel
M	Stainless Steel
K	Gray Cast Iron
	Nodular Cast Iron
N	Non-ferrous Metals
S	Heat-resistant alloy
	Titanium Alloy
H	Hard Materials

Classification of usage
✖: Interruption / 1st Choice
✖: Interruption / 2nd Choice
◓: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

Insert (Handed Insert shows Right-hand)		Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Medium-Roughing		KNMX 160405R/L-1	0.5								●	●														-	
		KNMX 160410R/L-1	1.0								●	●															

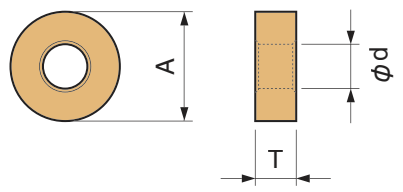
Round • Negative with Hole

(mm)

Description	A	T	ød
RN_0903_	9.525	3.96	3.81
RN_1204_	12.70	4.76	5.16

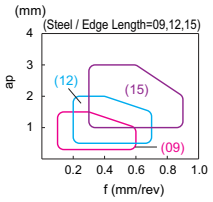
(mm)

Description	A	T	ød
RN_1506_	15.875	6.35	6.35



P	Free-cutting steel
	Carbon Steel and Alloy Steel
M	Stainless Steel
K	Gray Cast Iron
	Nodular Cast Iron
N	Non-ferrous Metals
S	Heat-resistant alloy
	Titanium Alloy
H	Hard Materials

Classification of usage
✖: Interruption / 1st Choice
✖: Interruption / 2nd Choice
◓: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

Insert		Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Medium-Roughing		RNMG 090300	-			●	●				●	●														D19	
		RNMG 120400	-			●	●				●	●					●	●		○							
		RNMG 150600	-								●	●					●	●		○						-	

 ● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

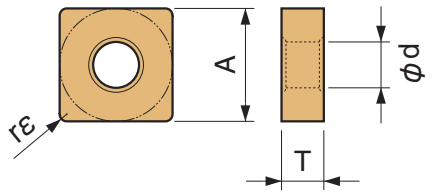
90°Square • Negative with Hole

(mm)

Description	A	T	ød
SN_0903_	9.525	3.18	3.81
SN_1204_	12.70	4.76	5.16

(mm)

Description	A	T	ød
SN_1506_	15.875	6.35	6.35
SN_1906_	19.05	6.35	7.94

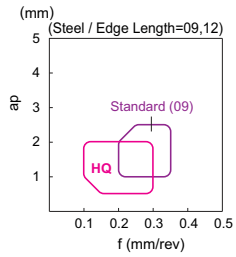


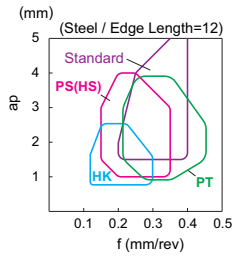
P	●	○			●	○	○	●	✖	✣														Free-cutting steel
																								Carbon Steel and Alloy Steel
M											●	◕									◔			Stainless Steel
K				●			✣						✖											Gray Cast Iron
							◔							●	✖									Nodular Cast Iron
N																								Non-ferrous Metals
S											○	◔									◔			Heat-resistant alloy
																								Titanium Alloy
H																								Hard Materials

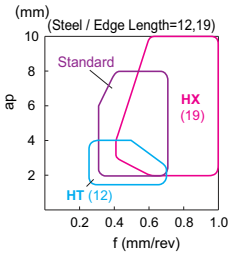
Classification of usage
✖: Interruption / 1st Choice
✣: Interruption / 2nd Choice
◕: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

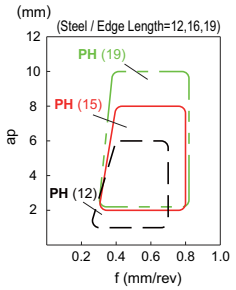
	Insert	Description		Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder
Finishing-Medium		SNMG	120404HQ	0.4	●	●	●		●	●		●	●														D12 D13
			120408HQ	0.8	●	●	●		●	●	●	●	●	●	●	●									●		
			120412HQ	1.2		●	●			●		●	●	●													
Medium cutting		SNMG	120404HK	0.4			●																				
			120408HK	0.8			●																				
			120412HK	1.2			●																				
Medium-Roughing		SNMG	120408PS	0.8	●				●		●	●	●	●	●	●									●		
			120412PS	1.2							●	●	●	●	●	●									●		
			120416PS	1.6								●	●	●	●	●											
Medium-Roughing		SNMG	120408HS	0.8		●	●			●		●	●														
			120412HS	1.2		●	●			●		●	●														
			120416HS	1.6		●	●			●		●	●														
Medium-Roughing	High Feed	SNMG	120408PT	0.8							●	●	●	●	●	●											
			120412PT	1.2							●	●	●	●	●	●											
Medium-Roughing	High Feed	SNMG	120408HT	0.8			●					●	●														
			120412HT	1.2			●																				
Roughing		SNMG	090304	0.4			●						●														D13
			090308	0.8			●						●								○						
		SNMG	120404	0.4		●	●	●			●	●						●	●	○	○						D12 D13
			120408	0.8		●	●	●			●	●	●	●	●	●	●	●	●	○	○				●		
			120412	1.2		●	●				●	●	●	●			●	●	●	○	○				●		
			120416	1.6		●	●				●	●	●	●			●	●	●		○						
			120420	2.0			●				●						●	●	●		○						
		SNMG	190612	1.2							●	●	●	●													-
			190616	1.6							●	●	●	●			●										
Roughing		SNMG	120408PH	0.8								●	●	●													D12 D13
			120412PH	1.2								●	●	●													
			120416PH	1.6								●	●	●													
		SNMG	150612PH	1.2								●	●														-
			150616PH	1.6								●	●														
		SNMG	190612PH	1.2								●	●	●													
			190616PH	1.6								●	●	●													
			190624PH	2.4								●	●														

Applicable Chipbreaker Range









For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B42

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

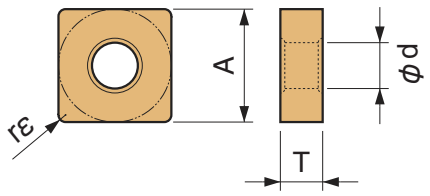
90°Square • Negative with Hole

(mm)

Description	A	T	ød
SN_0903_	9.525	3.18	3.81
SN_1204_	12.70	4.76	5.16

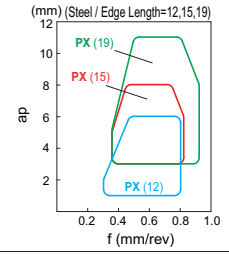
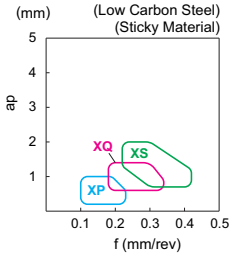
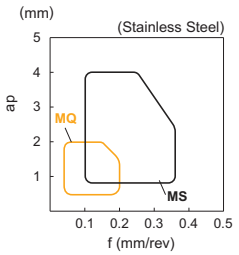
(mm)

Description	A	T	ød
SN_1506_	15.875	6.35	6.35
SN_1906_	19.05	6.35	7.94



		TN6010	TN6020	TN60	PV7005	PV7010	PV7020	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PR930	PR1005	PR1025	PR1125	KW10
P	Free-cutting steel																						
P	Carbon Steel and Alloy Steel		○			●	○		●	✖	✣												
M	Stainless Steel											●	◕								◔		
K	Gray Cast Iron																						
K	Nodular Cast Iron																						
N	Non-ferrous Metals																						
S	Heat-resistant alloy											○	◔								◔		
S	Titanium Alloy																						
H	Hard Materials																						

Classification of usage
✖: Interruption / 1st Choice
✣: Interruption / 2nd Choice
◕: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

Insert (Handed Insert shows Right-hand)		Description	Dim. (mm) rε	TN6010	TN6020	TN60	PV7005	PV7010	PV7020	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PR930	PR1005	PR1025	PR1125	KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Single Sided / Roughing / High Feed		SNMM 120408PX	0.8								●	●	●													D12 D13	
		SNMM 120412PX	1.2								●	●	●														
		SNMM 120416PX	1.6								●	●	●														
		SNMM 150612PX	1.2								●	●	●													-	
		SNMM 150616PX	1.6								●	●	●														
		SNMM 190612PX	1.2								●	●	●														
		SNMM 190616PX	1.6								●	●	●														
		SNMM 190624PX	2.4								●	●	●														
Low Carbon Steel	Finishing	SNMG 120408XP	0.8		●	●		●	●		●	●														D12 D13	
	Medium	SNMG 120408XQ	0.8		●	●		●	●		●	●															
	Roughing	SNMG 120408XS	0.8		●	●			●		●	●															
Stainless Steel	Finishing-Medium	SNMG 120404MQ	0.4											●	●								●				
		SNMG 120408MQ	0.8											●	●								●				
	Medium-Roughing	SNMG 120404MS	0.4											●	●								●				
		SNMG 120408MS	0.8											●	●								●				
		SNMG 120412MS	1.2											●	●								●				
		SNMG 120416MS	1.6											●	●								●				
Medium-Roughing	Low Cutting Force	SNMG 120408R/L-ST	0.8									●															—

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B42

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

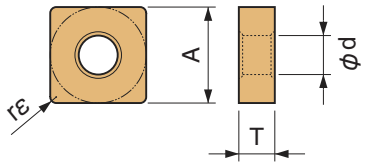
90°Square • Negative with Hole

(mm)

Description	A	T	ød
SN_0903_	9.525	3.18	3.81
SN_1204_	12.70	4.76	5.16

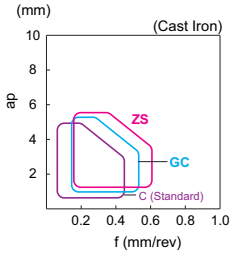
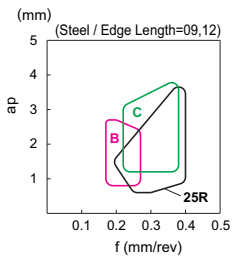
(mm)

Description	A	T	ød
SN_1506_	15.875	6.35	6.35
SN_1906_	19.05	6.35	7.94



		TN6010	TN6020	TN60	PV7005	PV7010	PV7020	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PR930	PR1005	PR1025	PR1125	KW10
P	Free-cutting steel																						
P	Carbon Steel and Alloy Steel							○															
M	Stainless Steel																						
K	Gray Cast Iron				●			⊕						✖									
K	Nodular Cast Iron							◷							●	✖							
N	Non-ferrous Metals																						
S	Heat-resistant alloy																						
S	Titanium Alloy																						
H	Hard Materials																						

Classification of usage
✖: Interruption / 1st Choice
⊕: Interruption / 2nd Choice
◓: Light Interruption / 1st Choice
◷: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

	Insert (Handed Insert shows Right-hand)	Description	Dim. (mm) rε	TN6010	TN6020	TN60	PV7005	PV7010	PV7020	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PR930	PR1005	PR1025	PR1125	KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Cast Iron	Roughing	SNMG 120408C	0.8							●							●	●		○						D12 D13	
		SNMG 120412C	1.2							●							●	●		○							
	Roughing	SNMG 120408ZS	0.8							●						●	●	●	○	○							
		SNMG 120412ZS	1.2							●						●	●	●	○	○							
	Roughing	SNMG 120408GC	0.8							●	●					●	●	●	○	○							
		SNMG 120412GC	1.2							●	●					●	●	●		○							
	Without Chipbreaker	SNGA 090304	0.4																						●	D13	—
		SNGA 090308	0.8																						●		
		SNGA 120404	0.4																						●	D12 D13	
		SNGA 120408	0.8				●																		●		
		SNGA 120412	1.2																						●		
		SNMA 120404	0.4							●							●	●		○							
		SNMA 120408	0.8							●						●	●	●	○	○							
		SNMA 120412	1.2							●						●	●	●	○	○							
		SNMA 120416	1.6							●						●	●	●	○	○							
		SNMA 120420	2.0							●						●	●	●		○							
	Without Chipbreaker	SNMN 120408	0.8							●										○						D34 D35	
		SNMN 120412	1.2																	○							
Finishing-Medium-Roughing	-B: Finishing-Medium -C: Medium-Roughing	SNGG 090304R/L-B	0.4			●	●																			D13	
		SNGG 090308R/L-B	0.8			●																					
		SNGG 120404R/L-C	0.4			●	●																		●	D12 D13	
		SNGG 120408R/L-C	0.8			●	●																		●		
		SNMG 120404R/L-C	0.4			●																					
		SNMG 120408R/L-C	0.8			●																					
Medium-Roughing	Low Cutting Force	SNGG 120404R/L-25R	0.4			●																					
		SNGG 120408R/L-25R	0.8			●																					

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B42

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

Turning Indexable Inserts

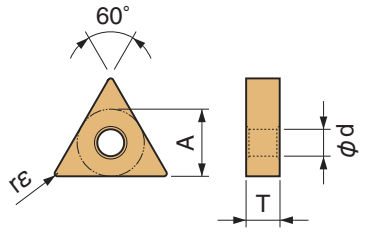
60°Triangle • Negative with Hole

(mm)

Description	A	T	ød
TN_1103_	6.35	3.18	2.26
TN_1104_	6.35	4.76	2.26

(mm)

Description	A	T	ød
TN_1603_	9.525	3.18	3.81
TN_1604_	9.525	4.76	3.81
TN_2204_	12.70	4.76	5.16

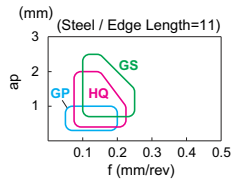


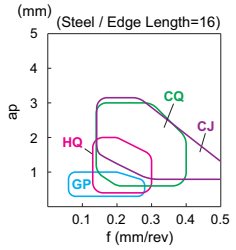
P	Free-cutting steel	
	Carbon Steel and Alloy Steel	● ○ ● ✖ ✥
M	Stainless Steel	● ◕ ◔
K	Gray Cast Iron	✥
	Nodular Cast Iron	◔
N	Non-ferrous Metals	
S	Heat-resistant alloy	○ ◔ ◔
	Titanium Alloy	
H	Hard Materials	

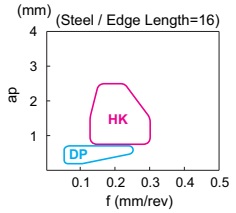
Classification of usage
✖: Interruption / 1st Choice
✥: Interruption / 2nd Choice
◕: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

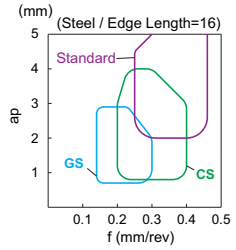
Insert		Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder
Finishing		TNGG 160404DP	0.4			●			●																		D14
		TNGG 160408DP	0.8			●			●																		D15
		TNMG 160404DP	0.4		●	●			●																		F43
		TNMG 160408DP	0.8		●	●			●																		F68
Finishing		TNMG 110404GP	0.4			●					●	●															D14
		TNMG 110408GP	0.8			●					●	●															F68
		TNMG 160402GP	0.2	●	●	●		●	●	●	●	●															D14
		TNMG 160404GP	0.4	●	●	●		●	●	●	●	●															D15
		TNMG 160408GP	0.8	●	●	●		●	●	●	●	●															F43 F68
Finishing-Medium		TNMG 110404HQ	0.4			●					●	●															D14
		TNMG 110408HQ	0.8			●					●	●															F68
		TNMG 160404HQ	0.4	●	●	●		●	●	●	●	●	●	●	●									●			
		TNMG 160408HQ	0.8	●	●	●		●	●	●	●	●	●	●	●									●			D14
		TNMG 160412HQ	1.2		●	●			●		●	●															D15
Finishing-Medium / Up Facing		TNMG 160404CQ	0.4	●	●	●		●	●	●	●	●	●														F43
		TNMG 160408CQ	0.8	●	●	●		●	●	●	●	●	●														F68
		TNMG 160412CQ	1.2		●	●			●	●	●	●	●														
		TNMG 220408CQ	0.8								●	●															D14
		TNMG 220412CQ	1.2								●	●															
Finishing-Medium		TNMP 160404TK	0.4		●				●		●	●									●						
		TNMP 160408TK	0.8		●				●		●	●									●						D14 D15 F43 F68
Medium		TNMG 160404HK	0.4			●																					
		TNMG 160408HK	0.8			●																					
		TNMG 160412HK	1.2			●																					
		TNMG 220404HK	0.4			●																					D14
		TNMG 220408HK	0.8			●																					
Medium-Roughing		TNMG 160404CS	0.4								●	●															D14 D15
		TNMG 160408CS	0.8								●	●															F43 F68
Medium-Roughing		TNMG 110404GS	0.4			●					●	●															D14
		TNMG 110408GS	0.8			●					●	●															F68
		TNMG 160404GS	0.4						●		●	●															D14
		TNMG 160408GS	0.8						●		●	●															D15
Medium-Roughing		TNMG 160404PS	0.4	●				●		●	●	●	●	●	●									●			F43
		TNMG 160408PS	0.8	●				●		●	●	●	●	●	●									●			F68
		TNMG 160412PS	1.2								●	●	●	●	●												
		TNMG 220404PS	0.4								●	●	●														
		TNMG 220408PS	0.8							●	●	●	●	●	●												D14
		TNMG 220412PS	1.2							●	●	●	●	●	●												
		TNMG 220416PS	1.6								●	●															

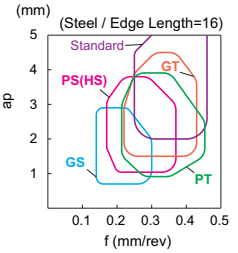
Applicable Chipbreaker Range











For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B42~B43

Inserts are sold in 10 piece boxes.

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

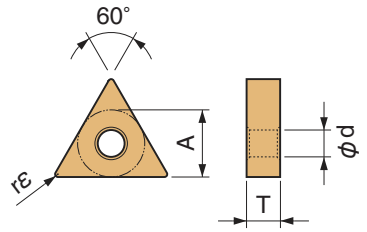
60°Triangle • Negative with Hole

(mm)

Description	A	T	ød
TN_1103_	6.35	3.18	2.26
TN_1104_	6.35	4.76	2.26

(mm)

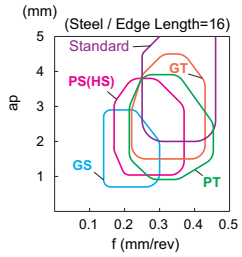
Description	A	T	ød
TN_1603_	9.525	3.18	3.81
TN_1604_	9.525	4.76	3.81
TN_2204_	12.70	4.76	5.16

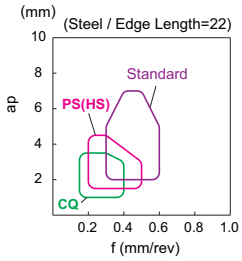


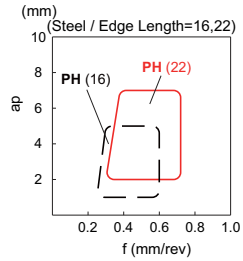
P																								Free-cutting steel
		○			●	○	○	●	✖	✥														Carbon Steel and Alloy Steel
M											●	◕									◔			Stainless Steel
K				●		✥							✖											Gray Cast Iron
						◔								●	✖									Nodular Cast Iron
N																								Non-ferrous Metals
S										○	◔										◔			Heat-resistant alloy
																								Titanium Alloy
H																								Hard Materials

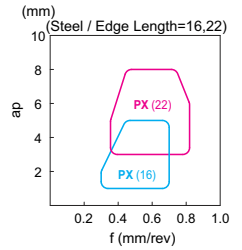
Classification of usage
✖: Interruption / 1st Choice
✥: Interruption / 2nd Choice
◕: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

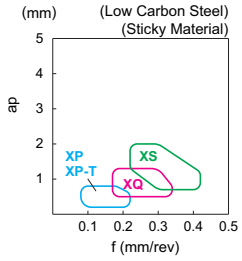
Insert		Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder
Medium-Roughing		TNMG 160404HS	0.4		●	●			●		●	●														D14 D15 F43 F68
		TNMG 160408HS	0.8		●	●			●		●	●														
		TNMG 160412HS	1.2		●	●			●		●	●														
		TNMG 220404HS	0.4			●																				D14
		TNMG 220408HS	0.8			●																				
		TNMG 220412HS	1.2								●															
Medium-Roughing / High Feed		TNMG 160408PT	0.8							●	●	●	●	●	●											D14 D15 F43 F68
		TNMG 160412PT	1.2							●	●	●	●	●	●											
Medium-Roughing / High Feed		TNMG 160408GT	0.8						●		●	●														
		TNMG 160412GT	1.2						●		●	●														
Medium-Roughing / High Feed		TNMG 160408HT	0.8			●					●	●														
		TNMG 160412HT	1.2			●						●														
Roughing		TNMG 160404	0.4		●	●	●	●		●	●	●		●	●	●	●	●	○	○				●		
		TNMG 160408	0.8		●	●	●			●	●	●		●	●	●	●	●	○	○				●		
		TNMG 160412	1.2			●				●	●	●		●	●	●	●	●		○						
		TNMG 160416	1.6							●	○					●	●	●		○						
		TNMG 160420	2.0							●						●	●	●		○						
		TNMG 220404	0.4							●						●			○	○						D14
		TNMG 220408	0.8			●				●	●	●				●	●	●	○	○						
		TNMG 220412	1.2			●				●	●	●				●	●	●	○	○						
		TNMG 220416	1.6								●															
Medium-Roughing		TNMG 160408PH	0.8								●	●														D14 D15 F43 F68
		TNMG 160412PH	1.2								●	●														
		TNMG 220408PH	0.8								●	●														D14
		TNMG 220412PH	1.2								●	●	●													
		TNMG 220416PH	1.6								●	●														
Single Sided / Roughing	High Feed	TNMM 160408PX	0.8								●	●	●													D14 D15 F43 F68
		TNMM 160412PX	1.2								●	●	●													
		TNMM 220408PX	0.8								●	●	●													D14
		TNMM 220412PX	1.2								●	●	●													
		TNMM 220416PX	1.6								●	●	●													
Low Carbon Steel	Finishing	TNMG 160404XP	0.4		●	●		●	●	●	●	●														D14 D15 F43 F68
		TNMG 160408XP	0.8		●	●		●	●	●	●	●														
	Finishing / Tough Edge	TNMG 160404XP-T	0.4			●																				
		TNMG 160408XP-T	0.8			●																				











For grades ⟨TN30 PV60 PR905 / PV30 PV90 PR915⟩, See Page B42~B43

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

Turning Indexable Inserts

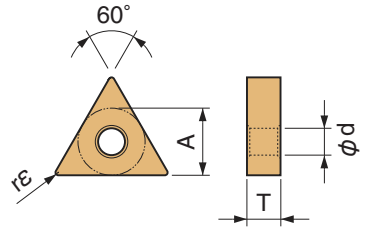
60°Triangle • Negative with Hole

(mm)

Description	A	T	ød
TN_1103_	6.35	3.18	2.26
TN_1104_	6.35	4.76	2.26

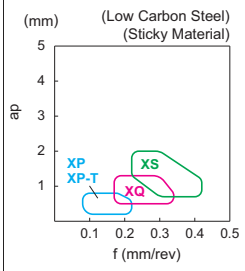
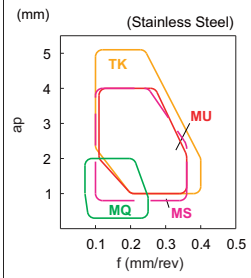
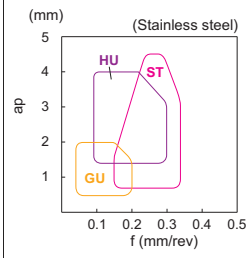
(mm)

Description	A	T	ød
TN_1603_	9.525	3.18	3.81
TN_1604_	9.525	4.76	3.81
TN_2204_	12.70	4.76	5.16



P																							Free-cutting steel
		○					○	●	✖														Carbon Steel and Alloy Steel
M											●	◕								◔			Stainless Steel
K							✥																Gray Cast Iron
							◔																Nodular Cast Iron
N																							Non-ferrous Metals
S											○	◔								◔			Heat-resistant alloy
																							Titanium Alloy
H																							Hard Materials

Classification of usage
✖: Interruption / 1st Choice
✥: Interruption / 2nd Choice
◕: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

	Insert Handed Insert shows Right-hand	Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Low Carbon Steel	Medium cutting	TNMG 160404XQ	0.4		●	●		●	●	●	●	●														D14 D15 F43 F68	
		TNMG 160408XQ	0.8		●	●		●	●	●	●	●															
	Roughing	TNMG 160408XS	0.8		●	●			●	●	●	●															
Stainless Steel	Finishing	TNMG 160404GU	0.4											●	●												
		TNMG 160408GU	0.8											●	●												
	Medium-Roughing	TNMG 160408HU	0.8									●		●	●												
		TNMG 160412HU	1.2											●	●												
	Finishing-Medium	TNMG 160404MQ	0.4											●	●									●			
		TNMG 160408MQ	0.8											●	●									●			
	Medium-Roughing	TNMG 160404MS	0.4											●	●									●			
		TNMG 160408MS	0.8											●	●									●			
		TNMG 160412MS	1.2											●	●									●			
	Medium-Roughing	TNMG 160404MU	0.4											●	●												
		TNMG 160408MU	0.8											●	●												
	Medium-Roughing	TNMG 160404TK	0.4											●	●									●			
		TNMG 160408TK	0.8											●	●									●			
	Medium-Roughing	TNMG 160404R/L-ST	0.4			●					●	●		●	●									●			
		TNMG 160408R/L-ST	0.8			●					●	●		●	●									●			
		TNMG 220404R/L-ST	0.4									●														D14	
		TNMG 220408R/L-ST	0.8									●															

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B42~B43

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

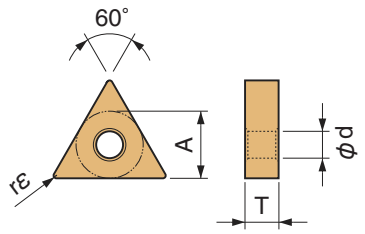
60°Triangle • Negative with Hole

(mm)

Description	A	T	ød
TN_1103_	6.35	3.18	2.26
TN_1104_	6.35	4.76	2.26

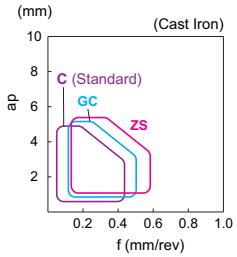
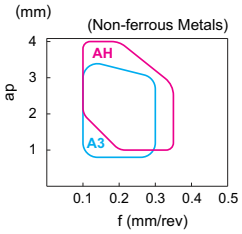
(mm)

Description	A	T	ød
TN_1603_	9.525	3.18	3.81
TN_1604_	9.525	4.76	3.81
TN_2204_	12.70	4.76	5.16



P	Free-cutting steel	
	Carbon Steel and Alloy Steel	○
M	Stainless Steel	
K	Gray Cast Iron	● ✠ ✠ ✠
	Nodular Cast Iron	● ✠ ✠
N	Non-ferrous Metals	✠
S	Heat-resistant alloy	
	Titanium Alloy	✠
H	Hard Materials	

Classification of usage
✠: Interruption / 1st Choice
✠: Interruption / 2nd Choice
●: Light Interruption / 1st Choice
○: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

	Insert (Handed Insert shows Right-hand)	Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Cast Iron	Roughing	TNMG 160404C	0.4							●							●	●	○	○						D14 D15 F43 F68	
		TNMG 160408C	0.8							●							●	●	○	○							
		TNMG 160412C	1.2							●							●	●		○							
	Roughing	TNMG 160408ZS	0.8							●						●	●	●	○	○							
		TNMG 160412ZS	1.2							●						●	●	●		○							
	Roughing	TNMG 160408GC	0.8							●	●					●	●	●	○	○							
		TNMG 160412GC	1.2							●	●					●	●	●		○							
	Without Chipbreaker	TNGA 110304	0.4																						●	D14	—
		TNGA 110308	0.8																						●		
		TNGA 160404	0.4				●																		●	D14 D15 F43 F68	
		TNGA 160408	0.8				●																		●		
		TNMA 160404	0.4			●				●						●	●	●	○	○							
		TNMA 160408	0.8			●				●						●	●	●	○	○							
		TNMA 160412	1.2							●						●	●	●	○	○							
		TNMA 160416	1.6							●						●	●	●		○							
		TNMA 160420	2.0							●						●	●	●		○							
		TNMA 220408	0.8								●								○							D14	
Cast Iron	Without Hole Without Chipbreaker	TNGN 160308	0.8			●													○							-	
		TNGN 160312	1.2			●																					
		TNMN 220408	0.8			●													○								
Non-ferrous Metals	Finishing-Medium / Sharp Edge	TNGG 160404R/L-A3	0.4																○						●	D14 D15 F43 F68	
		TNGG 160408R/L-A3	0.8																						●		
	Medium-Roughing / Sharp Edge	TNGG 160404AH	0.4																						●		
		TNGG 160408AH	0.8																						●		
	Medium-Roughing / With Honing	TNMG 160404AH	0.4																						●		
		TNMG 160408AH	0.8																						●		

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B42~B43

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

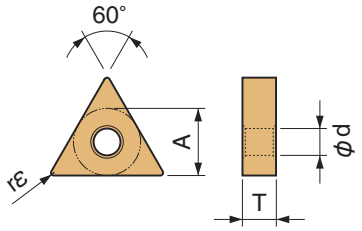
60°Triangle • Negative with Hole

(mm)

Description	A	T	ød
TN_1103_	6.35	3.18	2.26
TN_1104_	6.35	4.76	2.26

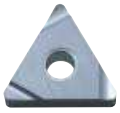
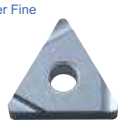
(mm)

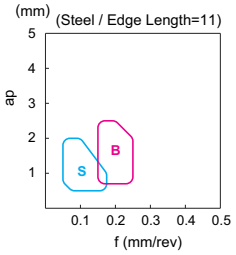
Description	A	T	ød
TN_1603_	9.525	3.18	3.81
TN_1604_	9.525	4.76	3.81
TN_2204_	12.70	4.76	5.16

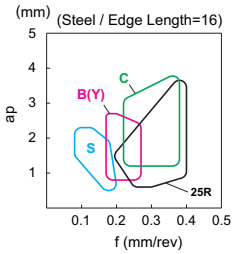


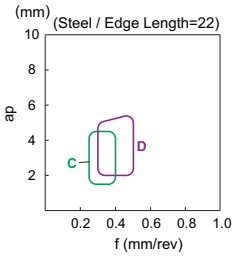
P																								Free-cutting steel
	●	○			●	○													◔					Carbon Steel and Alloy Steel
M																			◔			◔		Stainless Steel
K				●																			✱	Gray Cast Iron
																								Nodular Cast Iron
N																							✱	Non-ferrous Metals
S																						◔		Heat-resistant alloy
																							✱	Titanium Alloy
H																								Hard Materials

Classification of usage
✱: Interruption / 1st Choice
✱: Interruption / 2nd Choice
●: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

Insert (Handed Insert shows Right-hand)	Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Finishing  Surface Roughness Oriented	TNGG 110402R/L-S	0.2			●																			●	D14 F68	
	TNGG 110404R/L-S	0.4			●																			●		
	TNGG 110408R/L-S	0.8			●																					
	TNGG 160401R/L-S	0.1		●				●																	D14 D15 F43 F68	(mm) (Steel / Edge Length=11)
	TNGG 160402R/L-S	0.2	●	●	●			●												●			●			
	TNGG 160404R/L-S	0.4	●	●	●			●												●			●			
	TNGG 160408R/L-S	0.8	●	●	●			●												●			●			
Finishing Super Fine  Sharp Edge / Precision	TNEG 160402R/L-SSF	0.2		●	●			●												●						
	TNEG 160404R/L-SSF	0.4		●	●			●												●						
Finishing-Medium-Roughing -B: Finishing-Medium -C: Medium-Roughing -D: Roughing	TNGG 110302R/L-B	0.2			●																			●	D14	
	TNGG 110304R/L-B	0.4			●																			●		
	TNGG 110308R/L-B	0.8			●																			●		
	TNGG 160304R/L-B	0.4			●																				—	
	TNGG 160402R/L-B	0.2	●	●	●		R	●												●				●	D14 D15 F43 F68	(mm) (Steel / Edge Length=16)
	TNGG 160404R/L-B	0.4	●	●	●	●	●	●												●						
	TNGG 160408R/L-B	0.8			●																					
	TNGG 160402R/L-C	0.2		●				●																		
	TNGG 160404R/L-C	0.4	●	●	●	●	●	●												●				●		
	TNGG 160408R/L-C	0.8	●	●	●	●	●	●												●				●		
	TNGG 160412R/L-C	1.2			●	●																				
	TNGG 160416R/L-C	1.6				R																				
	TNGG 220404R/L-C	0.4		●	●	●																			D14	
	TNGG 220408R/L-C	0.8		●	●	●																				
	TNGG 220412R/L-D	1.2			●																					
	TNGG 110402R/L	0.2			●																			●	D14 D68	(mm) (Steel / Edge Length=22)
	TNGG 110404R/L	0.4			●																			L		
	TNGG 110408R/L	0.8			●																					
	TNMG 160404R/L-C	0.4		●	●			●																	D14 D15 F43 F68	
	TNMG 160408R/L-C	0.8		●	●			●																		
	TNMG 160412R/L-C	1.2			●																					
Medium-Roughing Low Cutting Resistance	TNGG 160404R/L-25R	0.4		●	●			●												●			●	●		
	TNGG 160408R/L-25R	0.8		●	●			●												●			●	●		







For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B42~B43

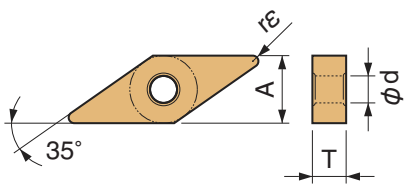
Inserts are sold in 10 piece boxes.

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

35°Diamond • Negative with Hole

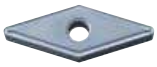
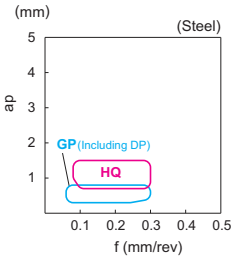
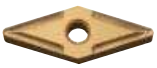
(mm)

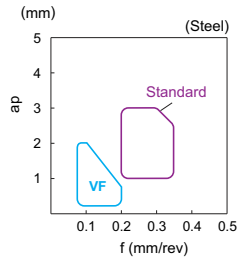
Description	A	T	ød
VN_1604_	9.525	4.76	3.81



P																								Free-cutting steel
	●	○			●	○	○	●	✖	✣								◷						Carbon Steel and Alloy Steel
M											●	◕						◷						Stainless Steel
K				●			✣						✖											Gray Cast Iron
							◷							●	✖									Nodular Cast Iron
N																								Non-ferrous Metals
S											○	◷												Heat-resistant alloy
																								Titanium Alloy
H																								Hard Materials

Classification of usage
✖: Interruption / 1st Choice
✣: Interruption / 2nd Choice
◕: Light Interruption / 1st Choice
◷: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

	Insert	Description	Dim. (mm) rε	Cermet TN6010	TN6020	TN60	PVD Cermet PV7005	PV7010	PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Finishing		VNMG 160404DP	0.4			●																				D16 D17 D18	
		VNMG 160408DP	0.8			●																					
Finishing		VNMG 160402GP	0.2	●	●	●		●	●		●	●															
		VNMG 160404GP	0.4	●	●	●		●	●		●	●															
		VNMG 160408GP	0.8	●	●	●		●	●		●	●															
Finishing-Medium		VNMG 160404VF	0.4	●	●			●	●		●	●															
		VNMG 160408VF	0.8	●	●			●	●		●	●															
		VNMG 160412VF	1.2		●				●		●	●															
Finishing-Medium		VNMG 160404HQ	0.4	●	●	●		●	●	●	●	●	●														
		VNMG 160408HQ	0.8	●	●	●		●	●	●	●	●	●														
		VNMG 160412HQ	1.2		●	●			●	●	●	●	●														
Medium		VNMG 160404TN-V	0.4			●																					
		VNMG 160408TN-V	0.8			●																					
		VNMG 160412TN-V	1.2			●																					
Roughing		VNMG 160404	0.4		●	●			●	●	●	●	●	●	●	●	●	●	○	○							
		VNMG 160408	0.8		●	●	●		●	●	●	●	●	●	●	●	●	●	○	○							
Low Carbon Steel	Finishing	VNMG 160404XP	0.4			●															●						



For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B43

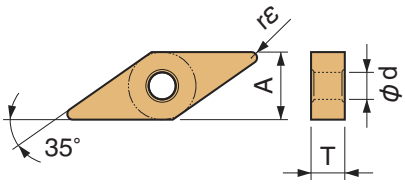
● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

35°Diamond • Negative with Hole

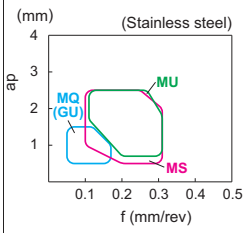
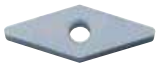
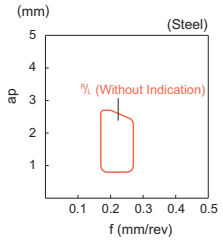
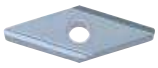
(mm)

Description	A	T	ød
VN_1604_	9.525	4.76	3.81



P	●	○			●	○	○	●	✖	✧								◔						Free-cutting steel
																								Carbon Steel and Alloy Steel
M											●	◕						◔			◔			Stainless Steel
K				●			✧						✖											Gray Cast Iron
							◔							●	✖									Nodular Cast Iron
N																								Non-ferrous Metals
S											○	◔									◔			Heat-resistant alloy
																								Titanium Alloy
H																								Hard Materials

Classification of usage
✖: Interruption / 1st Choice
✧: Interruption / 2nd Choice
◕: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

	Insert (Handed Insert shows Right-hand)	Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Stainless Steel	Finishing	VNMG 160404GU	0.4											●	●											D16 D17 D18	
		VNMG 160408GU	0.8											●	●												
	Finishing-Medium	VNMG 160404MQ	0.4											●	●									●			
		VNMG 160408MQ	0.8											●	●									●			
	Medium-Roughing	VNMG 160404MS	0.4											●	●									●			
		VNMG 160408MS	0.8											●	●									●			
		VNMG 160412MS	1.2											●	●									●			
	Medium-Roughing	VNMG 160404MU	0.4											●	●									●			
		VNMG 160408MU	0.8											●	●									●			
Cast Iron	 Without Chipbreaker	VNGA 160404	0.4				●																		●		
		VNGA 160408	0.8				●																		●		
Medium		VNGG 160402R/L	0.2	R	●	●			●												●						
		VNGG 160404R/L	0.4	R	●	●			●												●				●		
		VNGG 160408R/L	0.8	R		●															●				●		

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B43

Inserts are sold in 10 piece boxes.

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

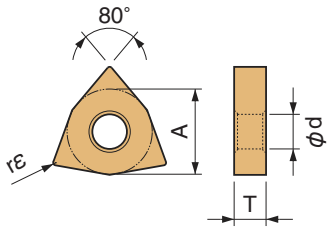
80°Trigon • Negative with Hole

(mm)

Description	A	T	ød
WN_06T3_	9.525	3.96	3.81
WN_0604_	9.525	4.76	3.81

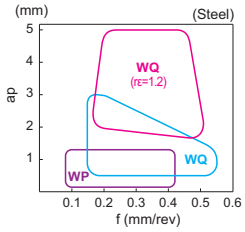
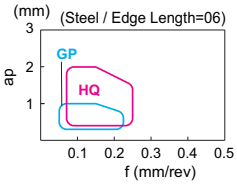
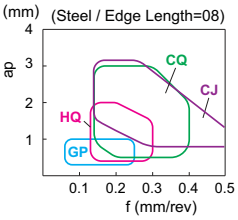
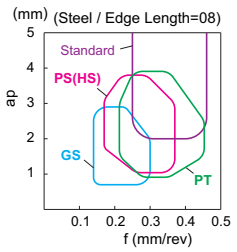
(mm)

Description	A	T	ød
WN_0804_	12.70	4.76	5.16



P																								Free-cutting steel
	●	○			●	○	○	●	✖	✖								◔						Carbon Steel and Alloy Steel
M											●	◕						◔			◔			Stainless Steel
K							✖																	Gray Cast Iron
							◔																	Nodular Cast Iron
N																								Non-ferrous Metals
S											○	◔									◔			Heat-resistant alloy
																								Titanium Alloy
H																								Hard Materials

Classification of usage
✖: Interruption / 1st Choice
✖: Interruption / 2nd Choice
◕: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

	Insert	Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Finishing	With Wiper Edge	WNMG 080404WP	0.4	●	●			●	●	●	●	●														D20 F70	
		080408WP	0.8		●			●	●	●	●	●															
Finishing-Medium	With Wiper Edge	WNMG 080404WQ	0.4	●	●	●		●	●	●	●	●															
		080408WQ	0.8		●	●		●	●	●	●	●															
		080412WQ	1.2		●				●	●	●	●															
Finishing		WNMG 060404GP	0.4			●					●	●														D20 F69	
		060408GP	0.8			●					●	●															
		WNMG 080404GP	0.4	●	●	●		●	●																	D20 F70	
		080408GP	0.8	●	●	●		●	●																		
Finishing-Medium		WNMG 06T304HQ	0.4			●						●														-	
		06T308HQ	0.8			●						●															
		WNMG 060404HQ	0.4			●					●	●														D20 F69	
		060408HQ	0.8			●					●	●															
		WNMG 080404HQ	0.4	●	●	●		●	●	●	●	●	●	●	●									●		D20 F70	
		080408HQ	0.8	●	●	●		●	●	●	●	●	●	●	●									●			
		080412HQ	1.2		●	●			●	●	●	●	●														
Finishing-Medium / Up Facing		WNMG 080404CQ	0.4	●	●			●	●	●	●	●															
		080408CQ	0.8	●	●	●		●	●	●	●	●	●														
		080412CQ	1.2		●	●			●	●	●	●	●														
		WNMG 080408CJ	0.8							●	●	●	●														
		080412CJ	1.2							●	●	●	●														
Finishing-Medium		WNMP 080404TK	0.4		●				●		●	●									●						
		080408TK	0.8		●				●		●	●									●						
Medium-Roughing		WNMG 080408CS	0.8								●	●															
Medium-Roughing		WNMG 060404GS	0.4			●					●	●														D20 F69	
		060408GS	0.8			●					●	●															
		WNMG 080404GS	0.4						●		●	●														D20 F70	
		080408GS	0.8						●		●	●															
		080412GS	1.2						●		●	●															

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B44

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

Turning Indexable Inserts

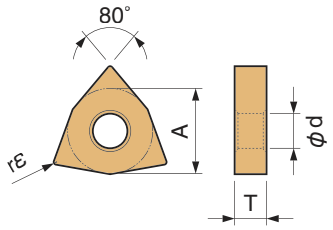
80°Trigon • Negative with Hole

(mm)

Description	A	T	ød
WN_06T3_	9.525	3.96	3.81
WN_0604_	9.525	4.76	3.81

(mm)

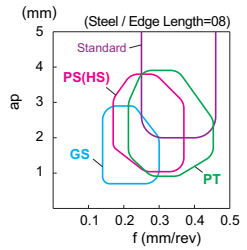
Description	A	T	ød
WN_0804_	12.70	4.76	5.16

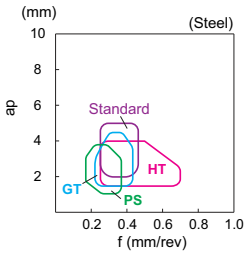


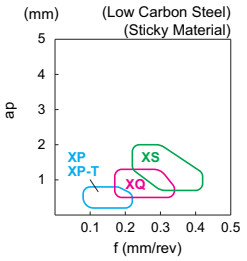
		TN6010	TN6020	TN60	PV7005	PV7010	PV7020	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PR930	PR1005	PR1025	PR1125	KW10
P	Free-cutting steel																						
P	Carbon Steel and Alloy Steel	●	○			●	○	○	●	✖	✣												
M	Stainless Steel											●	◕									◔	
K	Gray Cast Iron				●			✣						✖									
K	Nodular Cast Iron							◔							●	✖							
N	Non-ferrous Metals																						
S	Heat-resistant alloy											○	◔									◔	
S	Titanium Alloy																						
H	Hard Materials																						

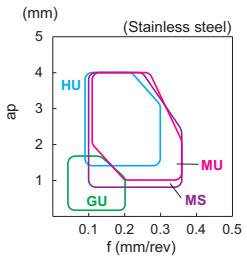
Classification of usage
✖: Interruption / 1st Choice
✣: Interruption / 2nd Choice
◕: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

Insert		Description	Dim. (mm) rε	TN6010	TN6020	TN60	PV7005	PV7010	PV7020	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PR930	PR1005	PR1025	PR1125	KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Medium-Roughing		WNMG 080404PS	0.4	●				●		●	●	●	●	●	●									●		D20 F70	(Steel / Edge Length=08)
		080408PS	0.8	●				●		●	●	●	●	●	●									●			
		080412PS	1.2							●	●	●	●	●	●												
		080416PS	1.6								●	●															
Medium-Roughing		WNMG 080404HS	0.4		●	●			●		●	●															
		080408HS	0.8		●	●			●		●	●															
		080412HS	1.2		●	●			●		●	●															
Medium-Roughing	High Feed	WNMG 080408PT	0.8							●	●	●	●	●	●												
		080412PT	1.2							●	●	●	●	●	●												
Medium-Roughing	High Feed	WNMG 080408GT	0.8								●	●															(Steel)
		080412GT	1.2								●	●															
Medium-Roughing	High Feed	WNMG 080408HT	0.8			●					●	●															
		080412HT	1.2			●					●	●															
Roughing		WNMG 080404	0.4			●				●	●	●		●	●	●	●	●	○	○				●			
		080408	0.8			●	●			●	●	●	●	●	●	●	●	●	○	○				●			
		080412	1.2			●				●	●	●	●	●	●	●	●	●	○	○				●			
Low Carbon Steel	Finishing	WNMG 080404XP	0.4		●	●		●	●	●	●	●															(Low Carbon Steel) (Sticky Material)
		080408XP	0.8		●	●		●	●	●	●	●															
Low Carbon Steel	Medium	WNMG 080404XQ	0.4		●	●		●	●	●	●	●															
		080408XQ	0.8		●	●		●	●	●	●	●															
Low Carbon Steel	Roughing	WNMG 080408XS	0.8		●	●			●	●	●	●															
Stainless Steel	Finishing	WNMG 080404GU	0.4											●	●												(Stainless steel)
		080408GU	0.8											●	●												
Stainless Steel	Medium-Roughing	WNMG 080408HU	0.8									●		●	●												
		080412HU	1.2											●	●												









Inserts are sold in 10 piece boxes.

 ● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

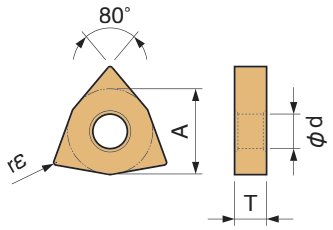
80°Trigon • Negative with Hole

(mm)

Description	A	T	ød
WN_06T3_	9.525	3.96	3.81
WN_0604_	9.525	4.76	3.81

(mm)

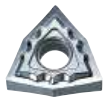
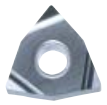
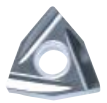
Description	A	T	ød
WN_0804_	12.70	4.76	5.16

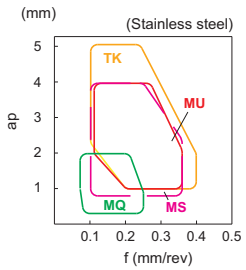


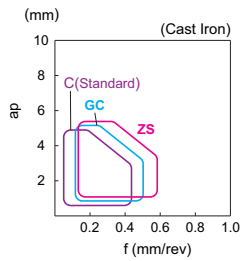
P	Free-cutting steel	
	Carbon Steel and Alloy Steel	
M	Stainless Steel	
K	Gray Cast Iron	
	Nodular Cast Iron	
N	Non-ferrous Metals	
S	Heat-resistant alloy	
	Titanium Alloy	
H	Hard Materials	

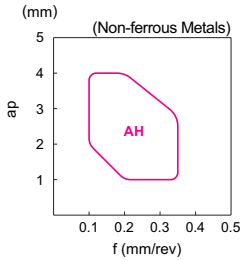
Classification of usage
- ✖: Interruption / 1st Choice
- ✖: Interruption / 2nd Choice
- ◓: Light Interruption / 1st Choice
- ◔: Light Interruption / 2nd Choice
- ●: Continuous / 1st Choice
- ○: Continuous / 2nd Choice

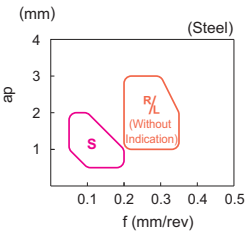
(In case hardness is under 45HRC)

	Insert (Handed Insert shows Right-hand)	Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Stainless Steel	Finishing-Medium	WNMG 080404MQ	0.4											●	●									●		D20 F70	(Stainless steel)
		WNMG 080408MQ	0.8											●	●									●			
	Medium-Roughing	WNMG 080404MS	0.4											●	●									●			
		WNMG 080408MS	0.8											●	●									●			
		WNMG 080412MS	1.2											●	●									●			
	Medium-Roughing	WNMG 080404MU	0.4											●	●									●			
		WNMG 080408MU	0.8											●	●									●			
	Medium-Roughing	WNMG 080404TK	0.4											●	●									●			
		WNMG 080408TK	0.8											●	●									●			
Cast Iron	Roughing	WNMG 080404C	0.4							●							●	●	○	○							(Cast Iron)
		WNMG 080408C	0.8							●							●	●	○	○							
		WNMG 080412C	1.2							●							●	●		○							
	Roughing	WNMG 080408ZS	0.8							●	●	●				●	●	●	○	○							
		WNMG 080412ZS	1.2							●	●	●				●	●	●	○	○							
	Roughing	WNMG 080408GC	0.8							●	●					●	●	●	○	○							
		WNMG 080412GC	1.2							●	●					●	●	●		○							
	Without Chipbreaker	WNMA 080408	0.8							●	●					●	●	●	○	○							
		WNMA 080412	1.2							●	●					●	●	●	○	○							
Non-ferrous Metals	 Medium-Roughing / Sharp Edge	WNGG 080404AH	0.4																						●		(Non-ferrous Metals)
		WNGG 080408AH	0.8																						●		
Finishing	 Surface Roughness Oriented	WNGG 060402R/L-S	0.2			●																			●		(Steel)
		WNGG 060404R/L-S	0.4			●																			●		
		WNGG 060408R/L-S	0.8			●																			●		
Medium cutting		WNGG 060404R/L	0.4			●																			●		
		WNGG 060408R/L	0.8			●																			●		









For grades (TN30 PV30 PV60 PV90 PR905 PR915), See Page B44

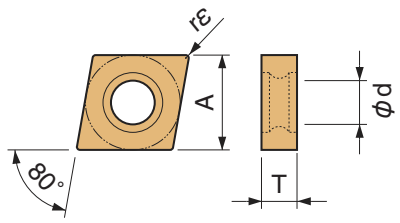
● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

Small Double Sided Tools

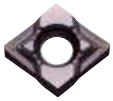
(mm)

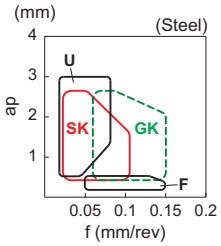
Description	A	T	ød
CN_U0703_	7.5	3.18	3.6



P																				◓					Free-cutting steel
																					◓				Carbon Steel and Alloy Steel
M																					◓				Stainless Steel
K																									Gray Cast Iron
																									Nodular Cast Iron
N																									Non-ferrous Metals
S																									Heat-resistant alloy
																									Titanium Alloy
H																									Hard Materials

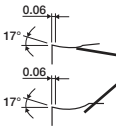
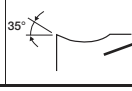
Classification of usage
✖: Interruption / 1st Choice
✖: Interruption / 2nd Choice
◓: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

Insert (Handed Insert shows Right-hand)		Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Finishing-Medium	 Sharp Edge	CNGU 070301MF-SK	< 0.1																				●			E4	
		CNGU 070302MF-SK	< 0.2																				●				
Medium-Roughing	With Honing	CNMU 070302E-GK	0.2																				●				
		CNMU 070304E-GK	0.4																			●	●				
Finishing	Sharp Edge	CNGU 0703005MF R/L-F	< 0.05																			R	R				
		CNGU 070301MF R/L-F	< 0.1																			R	R				
		CNGU 070302MF R/L-F	< 0.2																			R	R				
		CNGU 070304MF R/L-F	< 0.4																			R	R				
Low Feed	Sharp Edge	CNGU 0703005MF R/L-U	< 0.05																			R	R				
		CNGU 070301MF R/L-U	< 0.1																			R	R				
		CNGU 070302MF R/L-U	< 0.2																			R	R				
		CNGU 070304MF R/L-U	< 0.4																			R	R				
Low Feed	With Honing	CNGU 070301ME R/L-U	< 0.1																			R	R				
		CNGU 070302ME R/L-U	< 0.2																			R	R				
		CNGU 070304ME R/L-U	< 0.4																			R	R				



・Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05, <0.1, <0.2** etc.) indicate models with minus tolerance for corner R(rε).

Chipbreaker Selection

Cutting Range	Name	Design		Advantages
Finishing-Medium	SK			A low cutting force chipbreaker designed for chip control in stainless steel. Cutting performance is similar to comparable sized positive inserts.
Medium-Roughing	GK			Chip breaker “dot” and pocket design provide chip control at multiple depths of cut and feed rates.
Finishing	F			Good chip control for finishing to light cutting with low cutting force.
Low Feed	U			Good chip control at low feed rate and varied ap with low cutting force.

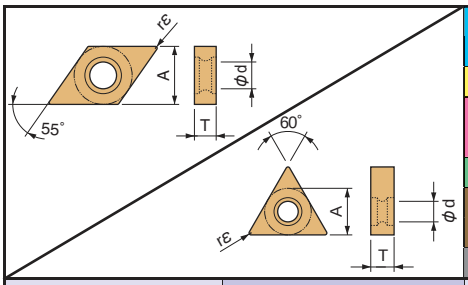
Inserts are sold in 10 piece boxes.

 ● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Small Double Sided Tools

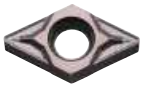
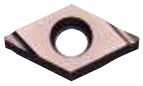
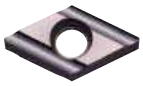
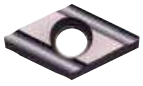
(mm)

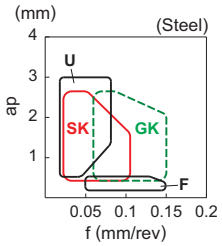
Description	A	T	ød
TN_U0903_	5.56	3.18	3.0
DN_U0803_	7.0	3.18	3.6



P																				◓				Free-cutting steel
																					◓			Carbon Steel and Alloy Steel
M																					◓			Stainless Steel
K																								Gray Cast Iron
																								Nodular Cast Iron
N																								Non-ferrous Metals
S																								Heat-resistant alloy
																								Titanium Alloy
H																								Hard Materials

Classification of usage
✱: Interruption / 1st Choice
◌: Interruption / 2nd Choice
◓: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

Insert (Handed Insert shows Right-hand)		Description		Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Finishing-Medium	Sharp Edge	DNGU	080301MF-SK	< 0.1																				●				E4
			080302MF-SK	< 0.2																				●				
			080304MF-SK	< 0.4																				●				
Finishing-Medium	 With Honing	DNMU	080302E-GK	0.2																				●				
			080304E-GK	0.4																		●		●				
Finishing	 Sharp Edge	DNGU	0803005MF R/L-F	< 0.05																			R	R				
			080301MF R/L-F	< 0.1																			R	R				
			080302MF R/L-F	< 0.2																			R	R				
			080304MF R/L-F	< 0.4																			R	R				
Low Feed	 Sharp Edge	DNGU	0803005MF R/L-U	< 0.05																			R	R				
			080301MF R/L-U	< 0.1																			R	R				
			080302MF R/L-U	< 0.2																			R	R				
			080304MF R/L-U	< 0.4																			R	R				
Low Feed	 With Honing	DNGU	080301ME R/L-U	< 0.1																			R	R				
			080302ME R/L-U	< 0.2																			R	R				
			080304ME R/L-U	< 0.4																			R	R				
Finishing	Sharp Edge	TNGU	0903005MF R/L-F	< 0.05																			R	R				E5
			090301MF R/L-F	< 0.1																			R	R				
			090302MF R/L-F	< 0.2																			R	R				
			090304MF R/L-F	< 0.4																			R	R				
Low Feed	Sharp Edge	TNGU	0903005MF R/L-U	< 0.05																			R	R				
			090301MF R/L-U	< 0.1																			R	R				
			090302MF R/L-U	< 0.2																			R	R				
			090304MF R/L-U	< 0.4																			R	R				
Low Feed	With Honing	TNGU	090301ME R/L-U	< 0.1																			R	R				
			090302ME R/L-U	< 0.2																			R	R				
			090304ME R/L-U	< 0.4																			R	R				

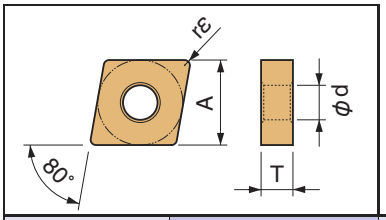


・Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05, <0.1, <0.2** etc.) indicate models with minus tolerance for corner R(rε).

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

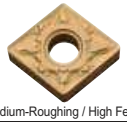
Inserts are sold in 10 piece boxes.

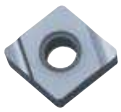
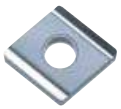
80°Diamond • Negative with Hole



(mm)

Description	A	T	ød
CN_0904_	9.525	4.76	3.81
CN_1204_	12.70	4.76	5.16

Insert	Description	Dim. (mm) rε	Cermet TN30	PVD Cermet PV30	PV60	PV90	PVD Coated Carbide PR915	PR905	Ref. Page for Toolholder
Finishing-Medium with Wiper Edge	CNMG 120404WQ	0.4				●			D8 F42 F66
	CNMG 120408WQ	0.8				●			
Finishing	CNMG 090404GP	0.4				●			D8 F66
	CNMG 090408GP	0.8				●			
	CNMG 120402GP	0.2			●	●			D8 F42 F66
	CNMG 120404GP	0.4	●		●	●			
	CNMG 120408GP	0.8			●	●			
Finishing-Medium	CNMG 090404HQ	0.4				●			D8 F66
	CNMG 090408HQ	0.8				●			
	CNMG 120404HQ	0.4	●	●	●	●			D8 F42 F66
	CNMG 120408HQ	0.8	●	●	●	●			
	CNMG 120412HQ	1.2	●		●	●			
Finishing-Medium / Up Facing	CNMG 120404CQ	0.4			●	●			
	CNMG 120408CQ	0.8			●	●			
	CNMG 120412CQ	1.2			●	●			
Finishing-Medium	CNMP 120404TK	0.4					●	●	
	CNMP 120408TK	0.8					●	●	
Medium-Roughing	CNMG 120404CS	0.4			●				
	CNMG 120408CS	0.8			●				
	CNMG 120412CS	1.2			●				
Medium-Roughing	CNMG 090404GS	0.4				●			D8 F66
	CNMG 090408GS	0.8				●			
	CNMG 120404GS	0.4			●	●			D8 F42 F66
	CNMG 120408GS	0.8			●	●			
	CNMG 120412GS	1.2			●	●			
Medium-Roughing	CNMG 120404HS	0.4	●		●	●			
	CNMG 120408HS	0.8	●	●	●	●			
	CNMG 120412HS	1.2			●	●			
 Medium-Roughing / High Feed	CNMG 120408GT	0.8				●			
	CNMG 120412GT	1.2				●			
Medium-Roughing / High Feed	CNMG 120408HT	0.8				●			
	CNMG 120412HT	1.2				●			

Insert Handed Insert shows Right-hand	Description	Dim. (mm) rε	Cermet TN30	PVD Cermet PV30	PV60	PV90	PVD Coated Carbide PR915	PR905	Ref. Page for Toolholder
Roughing	CNMG 120404	0.4	●	●	●	●			D8 F42 F66
	CNMG 120408	0.8	●	●	●	●			
	CNMG 120412	1.2			●	●			
Low Carbon Steel / Finishing	CNMG 120404XP	0.4		●	●	●			
	CNMG 120408XP	0.8			●	●			
Low Carbon Steel / Finishing / Tough Edge	CNMG 120404XP-T	0.4			●	●			
	CNMG 120408XP-T	0.8			●	●			
Low Carbon Steel / Medium cutting	CNMG 120404XQ	0.4			●	●			
	CNMG 120408XQ	0.8			●	●			
Low Carbon Steel / Roughing	CNMG 120408XS	0.8			●	●			
Without Chipbreaker	CNMA 120404	0.4	●	●					
	CNMA 120408	0.8	●	●					
 Finishing / Surface Roughness Oriented	CNGG 090402R/L-S	0.2				●			D8 F66
	CNGG 090404R/L-S	0.4				●			
	CNGG 090408R/L-S	0.8				●			
 Medium	CNGG 090404R/L	0.4				●			
	CNGG 090408R/L	0.8				●			

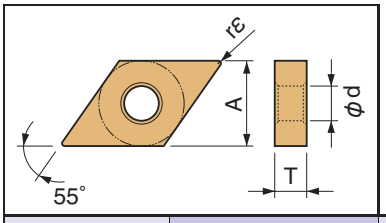
Please refer to pages B14 - B37

For other grade , See Page B14~B18

Inserts are sold in 10 piece boxes.

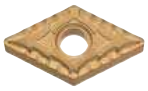
● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

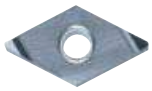
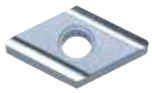
55°Diamond • Negative with Hole



(mm)

Description	A	T	ød
DN_1104_	9.525	4.76	3.81
DN_1504_	12.70	4.76	5.16
DN_1506_	12.70	6.35	5.16

Insert	Description	Dim. (mm) rε	Cermet TN30	PVD Cermet PV30	PV60	PV90	PVD Coated Carbide PR915	PR905	Ref. Page for Toolholder
Finishing	DNMG 110404GP	0.4				●			D11
	110408GP	0.8				●			F67
	DNMG 150402GP	0.2			●	●			D10
	150404GP	0.4			●	●			D11
	150408GP	0.8			●	●			F43
Finishing-Medium	DNMG 110402HQ	0.2				●			D11
	110404HQ	0.4				●			F67
	DNMG 150404HQ	0.4		●	●	●			D10 D11 F43
	150408HQ	0.8		●	●	●			
	150412HQ	1.2			●	●			
	DNMG 150604HQ	0.4		●		●			
	150608HQ	0.8		●		●			
	150612HQ	1.2		●					
 Finishing-Medium / Up Facing	DNMG 150404CQ	0.4			●	●			
	150408CQ	0.8			●	●			
	150412CQ	1.2			●	●			
Finishing-Medium	DNMP 150604TK	0.4					●	●	
	150608TK	0.8					●	●	
Medium-Roughing	DNMG 150404CS	0.4			●				
	150408CS	0.8			●				
Medium-Roughing	DNMG 110404GS	0.4				●			D11
	110408GS	0.8				●			F67
	DNMG 150404GS	0.4			●	●			D10 D11 F43
	150408GS	0.8			●	●			
	150412GS	1.2			●	●			
	DNMG 150604GS	0.4				●			
	150608GS	0.8				●			
	150612GS	1.2				●			
Medium-Roughing	DNMG 150404HS	0.4			●	●			
	150408HS	0.8		●	●	●			
	150412HS	1.2		●	●	●			
	DNMG 150604HS	0.4				●			
	150608HS	0.8				●			
	150612HS	1.2				●			
Medium-Roughing / High Feed	DNMG 150408GT	0.8				●			
	150412GT	1.2				●			
	DNMG 150608GT	0.8				●			
	150612GT	1.2				●			
Medium-Roughing / High Feed	DNMG 150408HT	0.8				●			
	150412HT	1.2				●			
	DNMG 150608HT	0.8				●			
	150612HT	1.2				●			

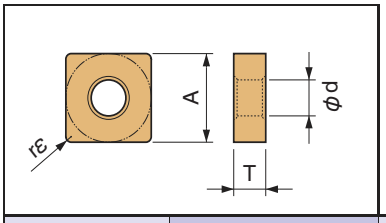
Insert (Handed Insert shows Right-hand)	Description	Dim. (mm) rε	Cermet TN30	PVD Cermet PV30	PV60	PV90	PVD Coated Carbide PR915	PR905	Ref. Page for Toolholder
Roughing	DNMG 150404	0.4	●	●	●	●			D10 D11 F43
	150408	0.8	●	●	●	●			
	150412	1.2				●			
Low Carbon Steel / Finishing	DNMG 150404XP	0.4			●	●			
	150408XP	0.8			●	●			
	DNMG 150604XP	0.4				●			
	150608XP	0.8				●			
Low Carbon Steel / Finishing / Tough Edge	DNMG 150404XP-T	0.4			●	●			
	150408XP-T	0.8			●	●			
Low Carbon Steel / Medium	DNMG 150404XQ	0.4			●	●			
	150408XQ	0.8			●	●			
Low Carbon Steel / Roughing	DNMG 150408XS	0.8			●	●			
Without Chipbreaker	DNMA 150404	0.4	●						
	150408	0.8	●	●					
 Finishing / Surface Roughness Oriented	DNGG 110402R/L-S	0.2				●			D11 F67
	110404R/L-S	0.4				●			
	110408R/L-S	0.8				●			
 Medium	DNGG 110404R/L	0.4				●			
	110408R/L	0.8				●			
	DNGG 150404R/L	0.4	●		●	●			D10 D11 F43
	150408R/L	0.8	●		●	●			

Please refer to pages B14 - B37

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

90°Square • Negative with Hole

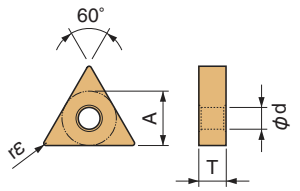


(mm)

Description	A	T	ød
SN_0903_	9.525	3.18	3.81
SN_1204_	12.70	4.76	5.16
SNMN1204_	12.70	4.76	-

Insert (Handed Insert shows Right-hand)	Description	Dim. (mm) rε	Cermet TN30	PVD Cermet PV30	PVD Cermet PV60	PVD Cermet PV90	PVD Coated Carbide PR915	PVD Coated Carbide PR905	Ref. Page for Toolholder
Finishing-Medium	SNMG 120404HQ	0.4			●	●			D12 D13
	SNMG 120408HQ	0.8	●	●	●	●			
	SNMG 120412HQ	1.2			●	●			
Medium-Roughing	SNMG 120408HS	0.8			●	●			
	SNMG 120412HS	1.2			●	●			
Medium-Roughing / High Feed	SNMG 120408HT	0.8				●			
	SNMG 120412HT	1.2				●			
Roughing	SNMG 120404	0.4	●		●	●			
	SNMG 120408	0.8	●		●	●			
	SNMG 120412	1.2			●	●			
	SNMG 120416	1.6				●			
Low Carbon Steel / Finishing	SNMG 120408XP	0.8			●	●			
Low Carbon Steel / Medium cutting	SNMG 120408XQ	0.8			●	●			
Low Carbon Steel / Roughing	SNMG 120408XS	0.8			●	●			
Without Chipbreaker	SNMA 120404	0.4	●						
	SNMA 120408	0.8	●						
Without Hole / without Chipbreaker	SNMN 120408	0.8						●	
	SNMN 120412	1.2						●	
-B: Finishing-Medium -C: Medium-Roughing	SNGG 090308R/L-B	0.8	R						D13
	SNGG 120404R/L-C	0.4	●			●			D12 D13
	SNGG 120408R/L-C	0.8	●			●			

60°Triangle • Negative with Hole



(mm)

Description	A	T	ød
TN_1104_	6.35	3.18	2.26
TN_1604_	9.525	4.76	3.81
TN_2204_	12.70	4.76	5.16

Insert	Description	Dim. (mm) rε	Cermet TN30	PVD Cermet PV30	PVD Cermet PV60	PVD Cermet PV90	PVD Coated Carbide PR915	PVD Coated Carbide PR905	Ref. Page for Toolholder
Finishing	TNMG 110404GP	0.4				●			D14 F68
	TNMG 110408GP	0.8				●			
	TNMG 160402GP	0.2			●	●			D14 D15 F43 F68
	TNMG 160404GP	0.4	●		●	●			
	TNMG 160408GP	0.8	●		●	●			
Finishing-Medium	TNMG 110404HQ	0.4				●			D14 F68
	TNMG 110408HQ	0.8				●			
	TNMG 160404HQ	0.4	●	●	●	●			D14 D15 F43 F68
	TNMG 160408HQ	0.8	●	●	●	●			
	TNMG 160412HQ	1.2	●		●	●			
Finishing-Medium / Up Facing	TNMG 160404CQ	0.4			●	●			
	TNMG 160408CQ	0.8			●	●			
	TNMG 160412CQ	1.2			●	●			
Finishing-Medium	TNMP 160404TK	0.4					●	●	
	TNMP 160408TK	0.8					●	●	
Medium-Roughing	TNMG 160404CS	0.4			●				
	TNMG 160408CS	0.8			●				
Medium-Roughing	TNMG 110404GS	0.4				●			D14 F68
	TNMG 110408GS	0.8				●			
	TNMG 160404GS	0.4			●	●			D14 D15 F43 F68
	TNMG 160408GS	0.8			●	●			
	TNMG 160412GS	1.2			●	●			
Medium-Roughing	TNMG 160404HS	0.4	●		●	●			
	TNMG 160408HS	0.8	●		●	●			
	TNMG 160412HS	1.2			●	●			
	TNMG 220408HS	0.8				●			D14
Medium-Roughing / High Feed	TNMG 160408GT	0.8				●			D14 D15 F43 F68
	TNMG 160412GT	1.2				●			
Medium-Roughing / High Feed	TNMG 160408HT	0.8				●			
	TNMG 160412HT	1.2				●			
Roughing	TNMG 160404	0.4	●	●	●	●			
	TNMG 160408	0.8	●	●	●	●			
	TNMG 160412	1.2	●			●			

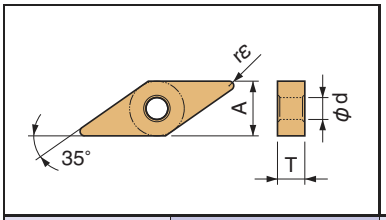
Please refer to pages B14 - B37

For other grade, See Page B25~B27, B28~B32

Inserts are sold in 10 piece boxes.

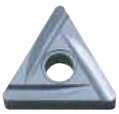
● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

35°Diamond • Negative with Hole



(mm)

Description	A	T	ød
VN_1604_	9.525	4.76	3.81

Insert Handed Insert shows Right-hand	Description	Dim. (mm) rε	Cermet TN30	PVD Cermet PV30	PV60	PV90	PVD Coated Carbide PR915	PR905	Ref. Page for Toolholder
 Low Carbon Steel / Finishing	TNMG 160404XP 160408XP	0.4 0.8			● ●	● ●			D14 D15 F43 F68
 Low Carbon Steel / Finishing / Tough Edge	TNMG 160404XP-T 160408XP-T	0.4 0.8			● ●	● ●			
 Low Carbon Steel / Medium cutting	TNMG 160404XQ 160408XQ	0.4 0.8			● ●	● ●			
 Low Carbon Steel / Roughing	TNMG 160408XS	0.8			●	●			
 Without Chipbreaker	TNMA 160404 160408	0.4 0.8	● ●	● ●					
 Finishing / Surface Roughness Oriented	TNGG 110402R/L-S 110404R/L-S 110408R/L-S	0.2 0.4 0.8				● ● ●			D14
	TNGG 160402R/L-S 160404R/L-S 160408R/L-S	0.2 0.4 0.8	● ● ●	● ●	● ● ●	● ●			D14
 Finishing-Medium	TNGG 160404R/L-Y 160408R/L-Y	0.4 0.8	● ●						D15 F43 F68
 -B: Finishing-Medium -C: Medium-Roughing	TNGG 110302R/L-B 110304R/L-B	0.2 0.4	● ●						D14
	TNGG 110402R/L 110404R/L 110408R/L	0.2 0.4 0.8				● ● ●			D14 F68
	TNGG 160402R/L-B 160404R/L-B	0.2 0.4	● ●	●	● ●				D14 D15
	TNGG 160404R/L-C 160408R/L-C	0.4 0.8	● ●	● ●	● ●	● ●			F43 F68
	TNGG 220404R/L-C 220408R/L-C	0.4 0.8	● ●						D14
	TNMG 160404R/L-C 160408R/L-C	0.4 0.8	● ●	● ●	● ●				D14
 Medium-Roughing / Low Cutting Resistance	TNGG 160404R/L-25R 160408R/L-25R	0.4 0.8	● ●		● ●				D15 F43 F68

Insert Handed Insert shows Right-hand	Description	Dim. (mm) rε	Cermet TN30	PVD Cermet PV30	PV60	PV90	PVD Coated Carbide PR915	PR905	Ref. Page for Toolholder
 Finishing	VNMG 160402GP 160404GP 160408GP	0.2 0.4 0.8	 ● 		● ● ●	● ● ●			D16 D17 D18
 Finishing-Medium	VNMG 160404HQ 160408HQ 160412HQ	0.4 0.8 1.2			● ● ●	● ● ●			
 Roughing	VNMG 160404 160408	0.4 0.8	● ●	● ●	● ●	● ●			
 Low Carbon Steel Finishing	VNMG 160404XP	0.4				●			
 Medium	VNGG 160402R/L 160404R/L 160408R/L	0.2 0.4 0.8	● ● 	● ●	● ● 	● ● ●			

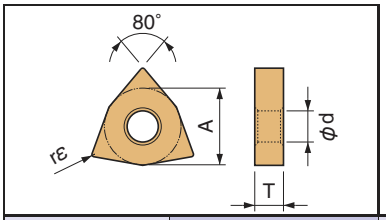
Please refer to pages B14 -B37

For other grade, See Page ➡ B28~B32, B34

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

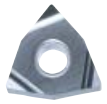
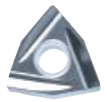
80°Trigon • Negative with Hole



(mm)

Description	A	T	ød
WN_06T3_	9.525	3.96	3.81
WN_0604_	9.525	4.76	3.81
WN_0804_	12.70	4.76	5.16

Insert	Description	Dim. (mm) rε	Cermet TN30	PVD Cermet PV30	PVD Cermet PV60	PVD Cermet PV90	PVD Coated Carbide PR915	PVD Coated Carbide PR905	Ref. Page for Toolholder
Finishing-Medium with Wiper Edge	WNMG 080404WQ	0.4				●			D20 F70
	080408WQ	0.8				●			
Finishing	WNMG 060404GP	0.4				●			D20 F69
	060408GP	0.8				●			
	WNMG 080404GP	0.4			●	●			D20 F70
	080408GP	0.8			●	●			
Finishing-Medium	WNMG 060404HQ	0.4				●			D20 F69
	060408HQ	0.8				●			
	WNMG 080404HQ	0.4			●	●			D20 F70
	080408HQ	0.8		●	●	●			
	080412HQ	1.2		●	●	●			
Finishing-Medium / Up Facing	WNMG 080404CQ	0.4			●	●			
	080408CQ	0.8			●	●			
	080412CQ	1.2			●	●			
Medium-Roughing	WNMG 080408CS	0.8			●				
Medium-Roughing	WNMG 060404GS	0.4				●			D20 F69
	060408GS	0.8				●			
	WNMG 080404GS	0.4			●	●			D20 F70
	080408GS	0.8			●	●			
	080412GS	1.2			●	●			
Medium-Roughing	WNMG 080404HS	0.4			●	●			
	080408HS	0.8			●	●			
	080412HS	1.2			●	●			
Medium-Roughing / High Feed	WNMG 080408GT	0.8				●			
	080412GT	1.2				●			
Medium-Roughing / High Feed	WNMG 080408HT	0.8				●			
	080412HT	1.2				●			

Insert (Handed Insert shows Right-hand)	Description	Dim. (mm) rε	Cermet TN30	PVD Cermet PV30	PVD Cermet PV60	PVD Cermet PV90	PVD Coated Carbide PR915	PVD Coated Carbide PR905	Ref. Page for Toolholder
Roughing	WNMG 080404	0.4	●	●					D20 F70
	080408	0.8	●	●					
Low Carbon Steel / Finishing	WNMG 080404XP	0.4			●	●			
	080408XP	0.8			●	●			
Low Carbon Steel / Medium	WNMG 080404XQ	0.4			●	●			
	080408XQ	0.8			●	●			
Low Carbon Steel / Roughing	WNMG 080408XS	0.8			●	●			
Without Chipbreaker	WNMA 080404	0.4	●						
	080408	0.8	●	●					
 Finishing / Surface Roughness Oriented	WNGG 060402R/L-S	0.2				●			D20 F69
	060404R/L-S	0.4				●			
	060408R/L-S	0.8				●			
 Medium	WNGG 060404R/L	0.4				●			
	060408R/L	0.8				●			

Please refer to pages B14 - B37

For other grade, See Page B35~B37

 ● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

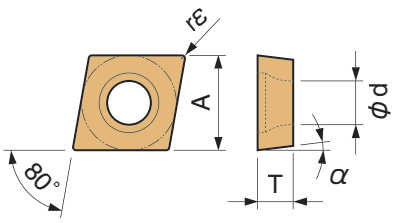
80°Diamond • Positive with Hole

(mm)

Description	A	T	ød	α
CC_0301_	3.5	1.4	1.9	7°
CC_0401_	4.3	1.8	2.3	7°

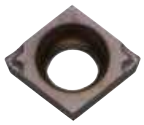
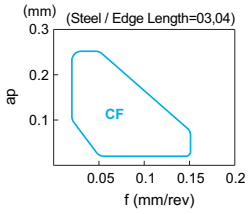
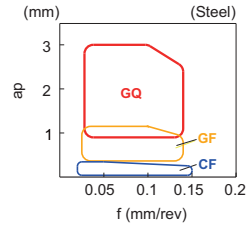
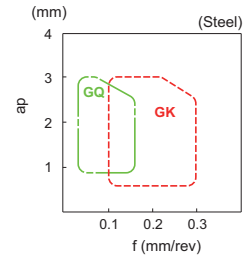
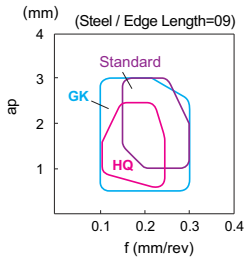
(mm)

Description	A	T	ød	α
CC_0602_	6.35	2.38	2.8	7°
CC_09T3_	9.525	3.97	4.4	7°
CC_1204_	12.7	4.76	5.5	7°



P																							Free-cutting steel
	●	○			●	○		●	✖	⊕								◔		◕				Carbon Steel and Alloy Steel
M												●	◕					◔		◕	◔			Stainless Steel
K																								Gray Cast Iron
																								Nodular Cast Iron
N																								Non-ferrous Metals
S												○	◔							◔	◔			Heat-resistant alloy
																								Titanium Alloy
H																								Hard Materials

Classification of usage
✖: Interruption / 1st Choice
⊕: Interruption / 2nd Choice
◕: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

Insert	Description	Dim. (mm) rε	Cermet TN6010	TN6020	TN60	PVD Cermet PV7005	PV7010	PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Minute ap  Sharp Edge	CCGT 030101M-CF	< 0.1																			●	●			F24 F49	
	CCGT 030102M-CF	< 0.2																			●	●				
	CCGT 040101M-CF	< 0.1																			●	●				
	CCGT 040102M-CF	< 0.2																			●	●				
Minute ap Sharp Edge / Polished Surface	CCGT 030101MP-CF	< 0.1																				●				
	CCGT 030102MP-CF	< 0.2																				●				
	CCGT 040101MP-CF	< 0.1																				●				
	CCGT 040102MP-CF	< 0.2																				●				
Finishing Sharp Edge	CCGT 060201MF-GF	< 0.1																				●			E11~13 F49~50	
	CCGT 060202MF-GF	< 0.2																				●				
	CCGT 09T301MF-GF	< 0.1																				●			E11~13 F24 F44	
	CCGT 09T302MF-GF	< 0.2																				●				
	CCGT 09T304MF-GF	< 0.4																				●				
Finishing Sharp Edge / Polished Surface	CCGT 060201MFP-GF	< 0.1																				●			E11~13 F49~50	
	CCGT 060202MFP-GF	< 0.2																				●				
	CCGT 09T301MFP-GF	< 0.1																				●			E11~13 F24 F44	
	CCGT 09T302MFP-GF	< 0.2																				●				
	CCGT 09T304MFP-GF	< 0.4																				●				
Finishing-Medium Sharp Edge	CCGT 060201MF-GQ	< 0.1																				●			E11~13 F49~50	
	CCGT 060202MF-GQ	< 0.2																				●				
	CCGT 060204MF-GQ	< 0.4																				●				
	CCGT 09T301MF-GQ	< 0.1																				●			E11~13 F24 F44	
	CCGT 09T302MF-GQ	< 0.2																				●				
	CCGT 09T304MF-GQ	< 0.4																				●				
Finishing-Medium Sharp Edge / Polished Surface	CCGT 060201MFP-GQ	< 0.1																				●			E11~13 F49~50	
	CCGT 060202MFP-GQ	< 0.2																				●				
	CCGT 060204MFP-GQ	< 0.4																				●				
	CCGT 09T301MFP-GQ	< 0.1																				●			E11~13 F24 F44	
	CCGT 09T302MFP-GQ	< 0.2																				●				
	CCGT 09T304MFP-GQ	< 0.4																				●				
Finishing-Medium	CCMT 060202GK	0.2	●	●			●	●		●	●	●	●	●	●					●		●	●		E11~13 F49~50	
	CCMT 060204GK	0.4	●	●			●	●		●	●	●	●	●	●				○	●		●	●			
	CCMT 09T302GK	0.2	●	●			●	●		●	●	●	●	●	●					●		●	●		E11~13 F24 F44	
	CCMT 09T304GK	0.4	●	●			●	●		●	●	●	●	●	●				○	●		●	●			
	CCMT 120404GK	0.4	●	●			●	●		●	●	●	●	●	●				○	●		●	●		E12	
	CCMT 120408GK	0.8	●	●			●	●		●	●	●	●	●	●				○	●		●	●			
	CCMT 120412GK	1.2		●				●		●	●	●	●	●	●					●		●	●			
Finishing-Medium	CCMT 060202HQ	0.2	●	●	●		●	●		●	●	●	●	●						●		●	●		E11~13 F49~50	
	CCMT 060204HQ	0.4	●	●	●		●	●		●	●	●	●	●						●		●	●			
	CCMT 09T302HQ	0.2	●	●	●		●	●		●	●	●	●	●						●		●	●		E11~13 F24 F44	
	CCMT 09T304HQ	0.4	●	●	●		●	●		●	●	●	●	●						●		●	●			
	CCMT 09T308HQ	0.8	●	●	●		●	●		●	●	●	●	●						●		●	●			

・Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05, <0.1, <0.2** etc.) indicate models with minus tolerance for corner R(rε).

For other grade, See Page ➡ **B74**

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

Turning Indexable Inserts

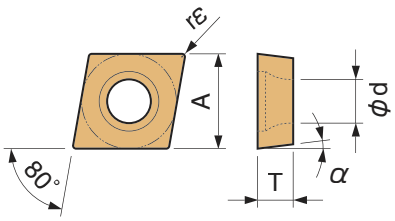
80°Diamond • Positive with Hole

(mm)

Description	A	T	ød	α
CC_0301_	3.5	1.4	1.9	7°
CC_0401_	4.3	1.8	2.3	7°

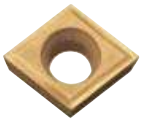
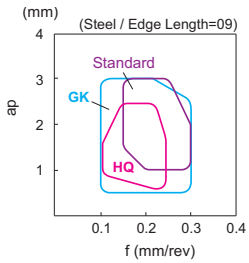
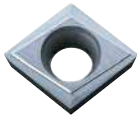
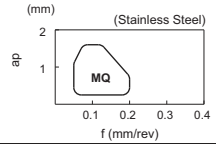
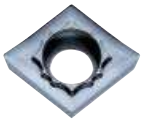
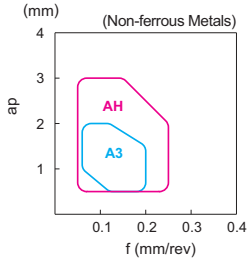
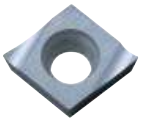
(mm)

Description	A	T	ød	α
CC_0602_	6.35	2.38	2.8	7°
CC_09T3_	9.525	3.97	4.4	7°
CC_1204_	12.7	4.76	5.5	7°



P																				◐				Free-cutting steel
		○				○	○	●	✖									◔		◐				Carbon Steel and Alloy Steel
M											●	◐						◔		◐	◔			Stainless Steel
K							✖																✖	Gray Cast Iron
							◔							●	✖									Nodular Cast Iron
N																							◐	Non-ferrous Metals
S											○	◔									◔			Heat-resistant alloy
																							◐	Titanium Alloy
H																								Hard Materials

Classification of usage
✖: Interruption / 1st Choice
✖: Interruption / 2nd Choice
◐: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

Insert (Handed Insert shows Left-hand)		Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Medium		CCGT 060201	0.1		●	●			●												●					E11~13	
		CCGT 060202	0.2		●	●			●												●					F24	
		CCGT 060204	0.4		●	●			●												●					F49~50	
		CCGT 09T301	0.1		●	●			●												●					E11~13	
		CCGT 09T302	0.2		●	●			●												●					F24	
		CCGT 09T304	0.4		●	●			●												●					F44	
		CCMT 09T308	0.8		●	●			●	●	●	●		●	●		●	●	○	○	●		●	●			
		CCGT 0602005M	< 0.05																				●			E11~13	
		CCGT 060201M	< 0.1																				●			F24	
		CCGT 060202M	< 0.2																				●			F49~50	
		CCGT 060204M	< 0.4																				●				
		CCGT 09T3005M	< 0.05																				●			E11~13	
		CCGT 09T301M	< 0.1																				●			F24	
		CCGT 09T302M	< 0.2																				●			F44	
		CCGT 09T304M	< 0.4																				●				
Medium cutting	Sharp Edge	CCGT 0602005MF	< 0.05																				●			E11~13	
		CCGT 060201MF	< 0.1																			●	●			F24	
		CCGT 060202MF	< 0.2																			●	●			F49~50	
		CCGT 060204MF	< 0.4																			●	●				
		CCGT 09T3005MF	< 0.05																				●			E11~13	
		CCGT 09T301MF	< 0.1																			●	●			F24	
		CCGT 09T302MF	< 0.2																			●	●			F44	
		CCGT 09T304MF	< 0.4																			●	●				
Medium Cutting		CCGT 060202FN-Z	0.2		●	●			●												●					E11~13	
		CCGT 060204FN-Z	0.4		●	●			●												●					F24	
																										F49~50	
		CCGT 09T302FN-Z	0.2		●	●															●						
		CCGT 09T304FN-Z	0.4		●	●															●						
		CCGT 09T308FN-Z	0.8																		●						
Stainless Steel	Finishing-Medium	CCMT 09T304MQ	0.4											●	●									●			
		CCMT 09T308MQ	0.8											●	●									●		E11~13	
																										F24	
																										F44	
Non-ferrous Metals	 Finishing-Medium / Sharp Edge	CCGT 09T304AH	0.4																						●		
		CCGT 09T308AH	0.8																						●		
Non-ferrous Metals	 Finishing-Medium / Sharp Edge	CCGT 09T302R/L-A3	0.2																						●		
		CCGT 09T304R/L-A3	0.4																						●		
		CCGT 09T308R/L-A3	0.8																						●		
		CCGT 120402R/L-A3	0.2																						●		
		CCGT 120404R/L-A3	0.4																						●	E12	
		CCGT 120408R/L-A3	0.8																						●		

・Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05**, **<0.1**, **<0.2** etc.) indicate models with minus tolerance for corner R(rε).

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B74

Inserts are sold in 10 piece boxes.

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

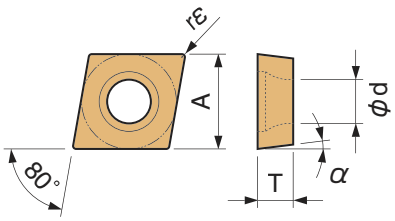
80°Diamond • Positive with Hole

(mm)

Description	A	T	ød	α
CC_0301_	3.5	1.4	1.9	7°
CC_0401_	4.3	1.8	2.3	7°

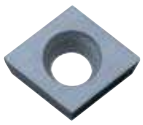
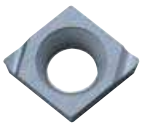
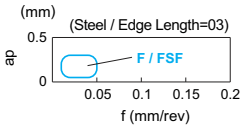
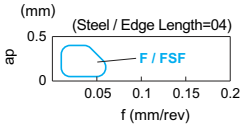
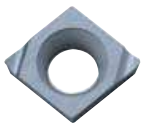
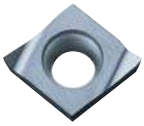
(mm)

Description	A	T	ød	α
CC_0602_	6.35	2.38	2.8	7°
CC_09T3_	9.525	3.97	4.4	7°
CC_1204_	12.7	4.76	5.5	7°



P	Free-cutting steel	◓
	Carbon Steel and Alloy Steel	● ○ ○ ◔ ◕
M	Stainless Steel	◔ ◕
K	Gray Cast Iron	✱
	Nodular Cast Iron	
N	Non-ferrous Metals	◕
S	Heat-resistant alloy	
	Titanium Alloy	◕
H	Hard Materials	

Classification of usage
✱: Interruption / 1st Choice
✱: Interruption / 2nd Choice
◕: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

	Insert (Handed Insert shows Left-hand)	Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Cast Iron	 Without Chipbreaker	CCGW 060200	0.0																						●	E11~13	—
		CCGW 060201	0.1																						●	F24	
		CCGW 060202	0.2																						●	F49~50	
		CCGW 09T300	0.0																						●	E11~13	
		CCGW 09T301	0.1																						●	F24	
		CCGW 09T302	0.2																						●	F44	
		CCGW 09T304	0.4																						●		
Finishing	Super Fine  Sharp Edge / Precision	CCET 0301003R/L-FSF	0.03																		●					F24 F49	 
		CCET 030101R/L-FSF	0.1			●															●						
		CCET 030102R/L-FSF	0.2			●															●						
		CCET 030104R/L-FSF	0.4			●															●						
		CCET 0401003R/L-FSF	0.03																		●						
		CCET 040101R/L-FSF	0.1			●															●						
		CCET 040102R/L-FSF	0.2			●															●						
		CCET 040104R/L-FSF	0.4			●															●						
		CCET 0301005MR/L-FSF	< 0.05																				●				
		CCET 030101MR/L-FSF	< 0.1																				●				
		CCET 030102MR/L-FSF	< 0.2																				●				
		CCET 030104MR/L-FSF	< 0.4																				●				
		CCET 0401005MR/L-FSF	< 0.05																				●				
		CCET 040101MR/L-FSF	< 0.1																				●				
		CCET 040102MR/L-FSF	< 0.2																				●				
		CCET 040104MR/L-FSF	< 0.4																				●				
Finishing	 Sharp Edge	CCGT 0301003R/L-F	0.03			●															●						
		CCGT 030101R/L-F	0.1			●															●				●		
		CCGT 030102R/L-F	0.2	L	L	●			L												●				●		
		CCGT 030104R/L-F	0.4	L	L	●			L												●				●		
		CCGT 0401003R/L-F	0.03																		●						
		CCGT 040101R/L-F	0.1			●															●				●		
		CCGT 040102R/L-F	0.2	L	L	●			L												●				●		
		CCGT 040104R/L-F	0.4	L	L	●			L												●				●		
		CCGT 0301005MR/L-F	< 0.05																			●	●				
		CCGT 030101MR/L-F	< 0.1																			●	●				
		CCGT 030102MR/L-F	< 0.2																			●	●				
		CCGT 030104MR/L-F	< 0.4																			●	●				
		CCGT 0401005MR/L-F	< 0.05																			●	●				
		CCGT 040101MR/L-F	< 0.1																			●	●				
		CCGT 040102MR/L-F	< 0.2																			●	●				
		CCGT 040104MR/L-F	< 0.4																			●	●				
Finishing-Medium		CCGT 060202R/L-FS	0.2			●																				E11~13 F24 F49~50	
		CCGT 060204R/L-FS	0.4			●																●					
		CCGT 09T302R/L-FS	0.2			●																			●	E11~13	
		CCGT 09T304R/L-FS	0.4			●																			●	F24	
		CCGT 09T308R/L-FS	0.8			●																				F44	

・Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05**, **<0.1**, **<0.2** etc.) indicate models with minus tolerance for corner R(rε).

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B74

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

Turning Indexable Inserts

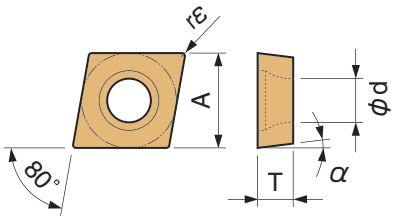
80°Diamond • Positive with Hole

(mm)

Description	A	T	ød	α
CC_0301_	3.5	1.4	1.9	7°
CC_0401_	4.3	1.8	2.3	7°

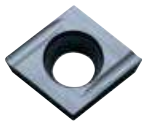
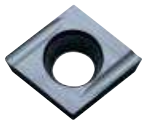
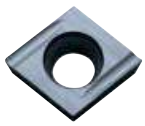
(mm)

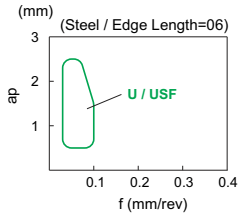
Description	A	T	ød	α
CC_0602_	6.35	2.38	2.8	7°
CC_09T3_	9.525	3.97	4.4	7°
CC_1204_	12.7	4.76	5.5	7°

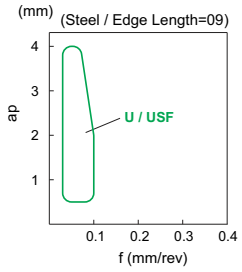


P																			●					Free-cutting steel
		○				○												◐		●				Carbon Steel and Alloy Steel
M																		◐		●				Stainless Steel
K																							✱	Gray Cast Iron
																								Nodular Cast Iron
N																							●	Non-ferrous Metals
S																								Heat-resistant alloy
																							●	Titanium Alloy
H																								Hard Materials

Classification of usage
✱: Interruption / 1st Choice
✱: Interruption / 2nd Choice
●: Light Interruption / 1st Choice
◐: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

Insert (Handed Insert shows Left-hand)	Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Low Feed, Sharp Edge 	CCGT 060200F R/L-U	0.0																						●	E11~13 F24 F49~50	
	CCGT 0602003F R/L-U	0.03			●															●				●		
	CCGT 060201F R/L-U	0.1		●	●															●				●		
	CCGT 060202F R/L-U	0.2		●	●			L												●				●		
	CCGT 09T300F R/L-U	0.0																						●	E11~13 F24 F44	
	CCGT 09T3003F R/L-U	0.03			●															●				●		
	CCGT 09T301F R/L-U	0.1		R	●															●				●		
	CCGT 09T302F R/L-U	0.2		R	●															●				●		
	CCGT 0602005MF R/L-U	< 0.05																			●	●			E11~13 F24 F49~50	
	CCGT 060201MF R/L-U	< 0.1																			●	●				
	CCGT 060202MF R/L-U	< 0.2																			●	●				
	CCGT 060204MF R/L-U	< 0.4																			●	●				
	CCGT 09T3005MF R/L-U	< 0.05																			●	●			E11~13 F24 F44	
	CCGT 09T301MF R/L-U	< 0.1																			●	●				
	CCGT 09T302MF R/L-U	< 0.2																			●	●				
	CCGT 09T304MF R/L-U	< 0.4																			●	●				
Low Feed, Super Fine, Sharp Edge / Precision 	CCET 0602003F R/L-USF	0.03			R															●					E11~13 F24 F49~50	
	CCET 060201F R/L-USF	0.1			●															●						
	CCET 060202F R/L-USF	0.2			●															●						
	CCET 09T3003F R/L-USF	0.03			R															●					E11~13 F24 F44	
	CCET 09T301F R/L-USF	0.1			●															●						
	CCET 09T302F R/L-USF	0.2			●															●						
	CCET 0602005MF R/L-USF	< 0.05																				●			E11~13 F24 F49~50	
	CCET 060201MF R/L-USF	< 0.1																				●				
	CCET 060202MF R/L-USF	< 0.2																				●				
	CCET 09T3005MF R/L-USF	< 0.05																				●			E11~13 F24 F44	
	CCET 09T301MF R/L-USF	< 0.1																				●				
	CCET 09T302MF R/L-USF	< 0.2																				●				
Low Feed, With Honing 	CCGT 060201E R/L-U	0.1			●															●					E11~13 F24 F49~50	
	CCGT 060202E R/L-U	0.2		●	●			L												●						
	CCGT 060204E R/L-U	0.4		●	●			L												●						
	CCGT 09T301E R/L-U	0.1			●															●					E11~13 F24 F44	
	CCGT 09T302E R/L-U	0.2		R	●															●						
	CCGT 09T304E R/L-U	0.4		R	●															●						
	CCGT 060201ME R/L-U	< 0.1																				●			E11~13 F24 F49~50	
	CCGT 060202ME R/L-U	< 0.2																				●				
	CCGT 060204ME R/L-U	< 0.4																				●				
	CCGT 09T301ME R/L-U	< 0.1																				●			E11~13 F24 F44	
	CCGT 09T302ME R/L-U	< 0.2																				●				
	CCGT 09T304ME R/L-U	< 0.4																				●				





・Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05**, **<0.1**, **<0.2** etc.) indicate models with minus tolerance for corner R(rε).

For grades (TN30 PV60 PR905 / PV30 PV90 PR915) , See Page B74

Inserts are sold in 10 piece boxes.

 ● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

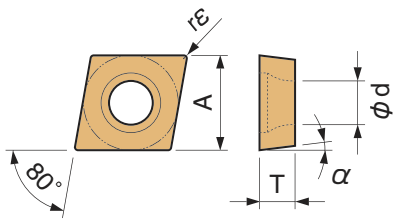
80°Diamond • Positive with Hole

(mm)

Description	A	T	ød	α
CPMT0802_	7.94	2.38	3.3	11°
CPMT0903_	9.525	3.18	4.4	11°

(mm)

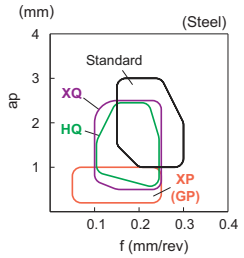
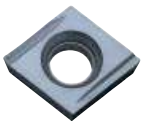
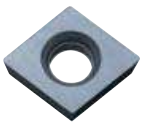
Description	A	T	ød	α
CP_0802_	7.94	2.38	3.5	11°
CP_0903_	9.525	3.18	4.5	11°

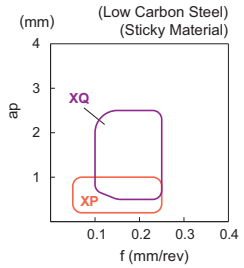


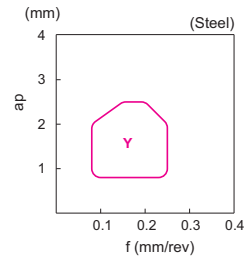
		Free-cutting steel	Carbon Steel and Alloy Steel	Stainless Steel	Gray Cast Iron	Nodular Cast Iron	Non-ferrous Metals	Heat-resistant alloy	Titanium Alloy	Hard Materials
P			●	○						
M				○				●	●	
K					●	●				
N							●			
S								○	●	
H										

Classification of usage
- ✖: Interruption / 1st Choice
- ✖: Interruption / 2nd Choice
- ◓: Light Interruption / 1st Choice
- ◔: Light Interruption / 2nd Choice
- ●: Continuous / 1st Choice
- ○: Continuous / 2nd Choice

(In case hardness is under 45HRC)

	Insert (Handed Insert shows Left-hand)	Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Finishing		CPMT 080204GP	0.4	●	●	●		●	●		●	●									●		●			F27 F49 F50	
		CPMT 090304GP 090308GP	0.4 0.8	● ●	● ●	● ●		● ●	● ●		● ●	● ●									● ●		● ●					
Finishing-Medium		CPMH 080204HQ 080208HQ	0.4 0.8	● ●	● ●	● ●		● ●	● ●		● ●	● ●	● ●	● ●	● ●						● ●		● ●	● ●				
		CPMH 090304HQ 090308HQ	0.4 0.8	● ●	● ●	● ●		● ●	● ●		● ●	● ●	● ●	● ●	● ●						● ●		● ●	● ●				
Medium cutting		CPMH 080204 080208	0.4 0.8	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●		● ●	● ●	● ●	● ●	● ●		○ ○	● ●		● ●	● ●				
		CPMH 090304 090308	0.4 0.8	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●		● ●	● ●	● ●	● ●	● ●	○ ○	○ ○	● ●		● ●	● ●				(Low Carbon Steel) (Sticky Material)
Low Carbon Steel	Finishing	CPMT 080204XP	0.4		●			●	●		●	●									●		●					
		CPMT 090304XP 090308XP	0.4 0.8		● ●			● ●	● ●		● ●	● ●									● ●		● ●					
Low Carbon Steel	Finishing-Medium	CPMT 090304XQ 090308XQ	0.4 0.8		● ●			● ●	● ●		● ●	● ●																
Finishing-Medium		CPMH 080204R/L-Y 080208R/L-Y	0.4 0.8		L	● ●			L												● ●		● ●		● ●			
		CPMH 090304R/L-Y 090308R/L-Y	0.4 0.8		L	● ●			L												● ●		● ●		● ●			
Cast Iron	 Without Chipbreaker	CPMB 080202 080204 080208	0.2 0.4 0.8																						● ● ●		
		CPMB 090302 090304 090308	0.2 0.4 0.8																						● ● ●		





・Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05**, **<0.1**, **<0.2** etc.) indicate models with minus tolerance for corner R(rε).

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B74

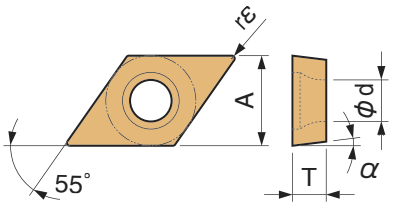
● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

55°Diamond • Positive with Hole

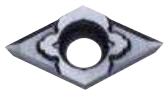
(mm)

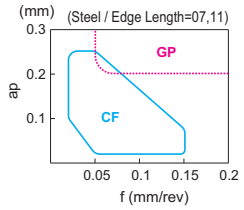
Description	A	T	ød	α
DC_0702_	6.35	2.38	2.8	7°
DC_11T3_	9.525	3.97	4.4	7°

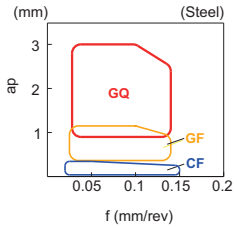


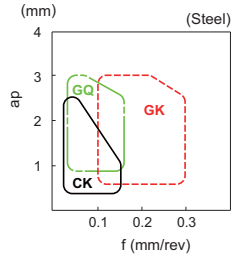
P																				◓				Free-cutting steel
	●	○			●	○		●	✖										◔		◓			Carbon Steel and Alloy Steel
M																			◔		◓			Stainless Steel
K																								Gray Cast Iron
																								Nodular Cast Iron
N																								Non-ferrous Metals
S																								Heat-resistant alloy
																								Titanium Alloy
H																								Hard Materials

Classification of usage
✖: Interruption / 1st Choice
✖: Interruption / 2nd Choice
◓: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

	Insert	Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Minute ap	Sharp Edge	DCGT 070202CF	0.2																		●						Refer to the table below
		DCGT 11T302CF	0.2																		●						
		DCGT 070201M-CF	< 0.1																			●	●				
		070202M-CF	< 0.2																			●	●				
		DCGT 11T301M-CF	< 0.1																			●	●				
		11T302M-CF	< 0.2																			●	●				
Minute ap	Sharp Edge / Polished Surface	DCGT 070201MP-CF	< 0.1																				●				
		070202MP-CF	< 0.2																				●				
		DCGT 11T301MP-CF	< 0.1																				●				
		11T302MP-CF	< 0.2																				●				
Finishing	Sharp Edge	DCGT 070201MF-GF	< 0.1																				●				
		070202MF-GF	< 0.2																				●				
		DCGT 11T301MF-GF	< 0.1																				●				
		11T302MF-GF	< 0.2																				●				
		11T304MF-GF	< 0.4																				●				
Finishing	Sharp Edge / Polished Surface	DCGT 070201MFP-GF	< 0.1																				●				
		070202MFP-GF	< 0.2																				●				
		DCGT 11T301MFP-GF	< 0.1																				●				
		11T302MFP-GF	< 0.2																				●				
		11T304MFP-GF	< 0.4																				●				
Finishing		DCGT 070201CK	0.1																		●						
		070202CK	0.2																		●						
		DCGT 11T301CK	0.1																		●						
		11T302CK	0.2																		●						
		DCGT 070201M-CK	< 0.1																			●	●				
		070202M-CK	< 0.2																			●	●				
		DCGT 11T301M-CK	< 0.1																			●	●				
		11T302M-CK	< 0.2																			●	●				
Finishing	Sharp Edge / Polished Surface	DCGT 070201MP-CK	< 0.1																				●				
		070202MP-CK	< 0.2																				●				
		DCGT 11T301MP-CK	< 0.1																				●				
		11T302MP-CK	< 0.2																				●				
Finishing		DCMT 070202GP	0.2	●	●	●		●	●		●	●									●		●				
		070204GP	0.4	●	●	●		●	●		●	●									●		●				
		DCMT 11T304GP	0.4	●	●	●		●	●		●	●									●		●				
		11T308GP	0.8	●	●	●		●	●		●	●									●		●				







・Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05**, **<0.1**, **<0.2** etc.) indicate models with minus tolerance for corner R(rε).

Description	Ref. Page for Toolholder
DC..07 type	**E14~17,E19~21,F29,F51~52**
DC..11 type	**E14~17,E19~21,F29,F44,F51~52**

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page **B75**

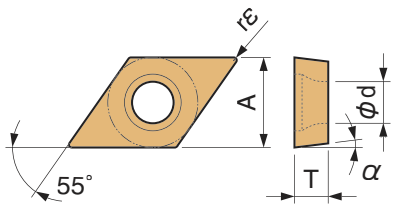
Inserts are sold in 10 piece boxes.

 ● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

55°Diamond • Positive with Hole

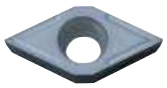
(mm)

Description	A	T	ød	α
DC_0702_	6.35	2.38	2.8	7°
DC_11T3_	9.525	3.97	4.4	7°

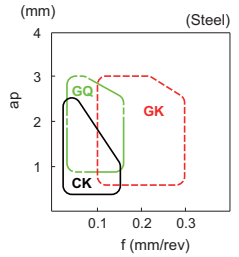


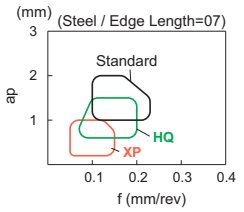
		TN6010	TN6020	TN60	PV7005	PV7010	PV7020	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PR930	PR1005	PR1025	PR1125	KW10
P	Free-cutting steel																			◓			
	Carbon Steel and Alloy Steel	●	○			●	○	○	●	✖	✣								◔		◓		
M	Stainless Steel											●	◓						◔		◓	◔	
K	Gray Cast Iron							✣															
	Nodular Cast Iron							◔							●	✖							
N	Non-ferrous Metals																						
S	Heat-resistant alloy											○	◔								◔		
	Titanium Alloy																						
H	Hard Materials																						

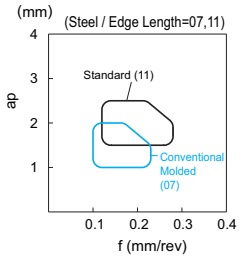
Classification of usage
✖: Interruption / 1st Choice
✣: Interruption / 2nd Choice
◓: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

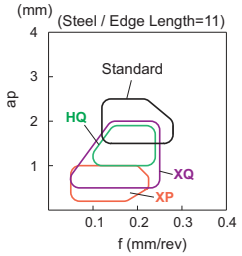
Insert	Description	Dim. (mm) rε	TN6010	TN6020	TN60	PV7005	PV7010	PV7020	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PR930	PR1005	PR1025	PR1125	KW10	Ref. Page for Toolholder
Finishing-Medium Sharp Edge	DCGT 070201MF-GQ	< 0.1																			●				Refer to the table below
	DCGT 070202MF-GQ	< 0.2																			●				
	DCGT 070204MF-GQ	< 0.4																			●				
	DCGT 11T301MF-GQ	< 0.1																			●				
	DCGT 11T302MF-GQ	< 0.2																			●				
	DCGT 11T304MF-GQ	< 0.4																			●				
Finishing-Medium Sharp Edge / Polished Surface	DCGT 070201MFP-GQ	< 0.1																			●				
	DCGT 070202MFP-GQ	< 0.2																			●				
	DCGT 070204MFP-GQ	< 0.4																			●				
	DCGT 11T301MFP-GQ	< 0.1																			●				
	DCGT 11T302MFP-GQ	< 0.2																			●				
	DCGT 11T304MFP-GQ	< 0.4																			●				
Finishing-Medium	DCMT 070202GK	0.2	●	●		●	●		●	●	●	●	●	●			○	○	●		●	●		
	DCMT 070204GK	0.4	●	●		●	●		●	●	●	●	●	●	●	●		○	●		●	●		
	DCMT 070208GK	0.8	●	●		●	●		●	●	●	●	●	●	●	●		○	●		●	●		
	DCMT 11T302GK	0.2	●	●		●	●		●	●	●	●	●	●					●		●	●		
	DCMT 11T304GK	0.4	●	●		●	●		●	●	●	●	●	●				○	●		●	●		
	DCMT 11T308GK	0.8	●	●		●	●		●	●	●	●	●	●				○	●		●	●		
Finishing-Medium	DCMT 070202HQ	0.2	●	●	●	●	●		●	●	●	●								●		●			
	DCMT 070204HQ	0.4	●	●	●	●	●		●	●	●	●	●	●						●		●	●		
	DCMT 070208HQ	0.8	●	●	●	●	●		●	●	●	●	●	●						●		●	●		
	DCMT 11T302HQ	0.2	●	●	●	●	●		●	●	●	●	●	●						●		●	●		
	DCMT 11T304HQ	0.4	●	●	●	●	●		●	●	●	●	●	●						●		●	●		
	DCMT 11T308HQ	0.8	●	●	●	●	●		●	●	●	●	●	●						●		●	●		
Medium 	DCGT 070201	0.1		●	●															●					
	DCGT 070202	0.2		●	●			●												●					
	DCGT 070204	0.4		●	●			●												●					
	DCGT 11T301	0.1			●															●					
	DCGT 11T302	0.2		●	●			●												●					
	DCGT 11T304	0.4		●	●			●												●					
	DCMT 11T308	0.8		●	●			●	●							●	●	○	○	●		●			
	DCGT 0702005M	< 0.05																			●				
	DCGT 070201M	< 0.1																			●				
	DCGT 070202M	< 0.2																			●				
	DCGT 070204M	< 0.4																			●				
	DCGT 11T3005M	< 0.05																			●				
	DCGT 11T301M	< 0.1																			●				
	DCGT 11T302M	< 0.2																			●				
	DCGT 11T304M	< 0.4																			●				
Medium Sharp Edge	DCGT 0702005MF	< 0.05																			●				
	DCGT 070201MF	< 0.1																		●	●				
	DCGT 070202MF	< 0.2																		●	●				
	DCGT 070204MF	< 0.4																		●	●				
	DCGT 11T3005MF	< 0.05																			●				
	DCGT 11T301MF	< 0.1																		●	●				
	DCGT 11T302MF	< 0.2																		●	●				
	DCGT 11T304MF	< 0.4																		●	●				

Applicable Chipbreaker Range









・Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05**, **<0.1**, **<0.2** etc.) indicate models with minus tolerance for corner R(rε).

Description	Ref. Page for Toolholder
DC..07 type	**E14~17,E19~21,F29,F51~52**
DC..11 type	**E14~17,E19~21,F29,F44,F51~52**

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page **B75**

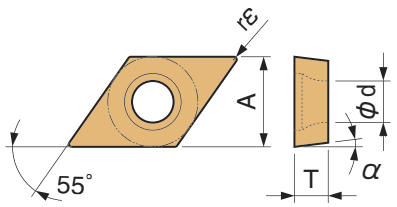
● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

55°Diamond • Positive with Hole

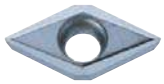
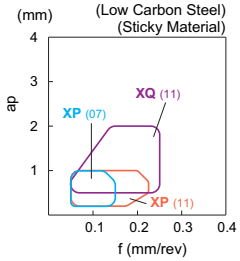
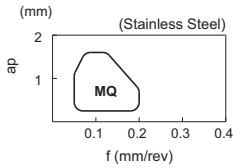
(mm)

Description	A	T	ød	α
DC_0702_	6.35	2.38	2.8	7°
DC_11T3_	9.525	3.97	4.4	7°



P	Free-cutting steel	○ ● ✖
	Carbon Steel and Alloy Steel	◔ ◕
M	Stainless Steel	● ◕ ◔ ◕ ◔
K	Gray Cast Iron	
	Nodular Cast Iron	
N	Non-ferrous Metals	
S	Heat-resistant alloy	○ ◔ ◔
	Titanium Alloy	
H	Hard Materials	

Classification of usage
✖: Interruption / 1st Choice
✖: Interruption / 2nd Choice
◕: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

	Insert	Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Medium	 Sharp Edge	DCGT 070202FN-Z	0.2		●	●			●												●					Refer to the table below	—
		DCGT 070204FN-Z	0.4		●	●			●												●						
		DCGT 11T302FN-Z	0.2		●	●			●												●						
		DCGT 11T304FN-Z	0.4		●	●			●												●						
		DCGT 11T308FN-Z	0.8																		●						
Low Carbon Steel	Finishing	DCMT 070204XP	0.4		●			●	●		●	●									●		●				
		DCMT 11T302XP	0.2		●			●	●		●	●									●		●				
		DCMT 11T304XP	0.4		●			●	●		●	●									●		●				
		DCMT 11T308XP	0.8		●			●	●		●	●									●		●				
Low Carbon Steel	Finishing-Medium	DCMT 11T304XQ	0.4		●			●	●		●	●															
		DCMT 11T308XQ	0.8		●			●	●		●	●															
Stainless Steel	Finishing-Medium	DCMT 070202MQ	0.2											●	●									●			
		DCMT 070204MQ	0.4											●	●									●			
		DCMT 11T302MQ	0.2											●	●									●			
		DCMT 11T304MQ	0.4											●	●									●			

・Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05**, **<0.1**, **<0.2** etc.) indicate models with minus tolerance for corner R(rε).

Description	Ref. Page for Toolholder
DC..07 type	**E14~17,E19~21,F29,F51~52**
DC..11 type	**E14~17,E19~21,F29,F44,F51~52**

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B75

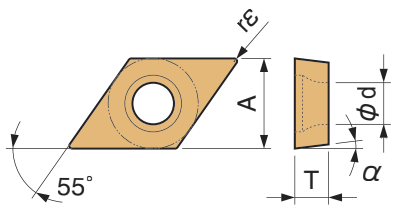
Inserts are sold in 10 piece boxes.

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

55°Diamond • Positive with Hole

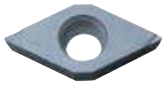
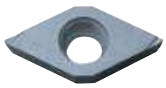
(mm)

Description	A	T	ød	α
DC_0702_	6.35	2.38	2.8	7°
DC_11T3_	9.525	3.97	4.4	7°



		TN6010	TN6020	TN60	PV7005	PV7010	PV7020	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PR930	PR1005	PR1025	PR1125	KW10
P	Free-cutting steel																			◓			
P	Carbon Steel and Alloy Steel			○															◔		◓		
M	Stainless Steel																		◔		◓		
K	Gray Cast Iron																						
K	Nodular Cast Iron																						
N	Non-ferrous Metals																						◓
S	Heat-resistant alloy																						
S	Titanium Alloy																						◓
H	Hard Materials																						

Classification of usage
✖: Interruption / 1st Choice
: Interruption / 2nd Choice
◓: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

	Insert (Handed Insert shows Left-hand)	Description	Dim. (mm) rε	TN6010	TN6020	TN60	PV7005	PV7010	PV7020	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PR930	PR1005	PR1025	PR1125	KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Finishing		DCGT 0702003R/L-F	0.03																		●				●	Refer to the table below	(mm) (Steel / Edge Length=07,11) ap 3 2 1 F / FSF (07) F / FSF (11) 0.1 0.2 0.3 0.4 f (mm/rev)
		070201R/L-F	0.1			●															●				●		
		070202R/L-F	0.2			●															●				●		
		070204R/L-F	0.4			●															●				●		
		DCGT 11T3003R/L-F	0.03																		●				R		
		11T301R/L-F	0.1			●															●				●		
		11T302R/L-F	0.2			●															●				●		
		11T304R/L-F	0.4			●															●				●		
		DCGT 0702005MR/L-F	< 0.05																			●	●				
		070201MR/L-F	< 0.1																			●	●				
		070202MR/L-F	< 0.2																			●	●				
		070204MR/L-F	< 0.4																			●	●				
		DCGT 11T3005MR/L-F	< 0.05																			●	●				
		11T301MR/L-F	< 0.1																			●	●				
		11T302MR/L-F	< 0.2																			●	●				
		11T304MR/L-F	< 0.4																			●	●				
Finishing	Super Fine 	DCET 0702003R/L-FSF	0.03																		●						
		070201R/L-FSF	0.1			●															●						
		070202R/L-FSF	0.2			●															●						
		070204R/L-FSF	0.4			●															●						
		DCET 11T3003R/L-FSF	0.03																		●						
		11T301R/L-FSF	0.1			●															●						
		11T302R/L-FSF	0.2			●															●						
		11T304R/L-FSF	0.4			●															●						
		DCET 0702005MR/L-FSF	< 0.05																				●				
		070201MR/L-FSF	< 0.1																				●				
		070202MR/L-FSF	< 0.2																				●				
		070204MR/L-FSF	< 0.4																				●				
		DCET 11T3005MR/L-FSF	< 0.05																				●				
		11T301MR/L-FSF	< 0.1																				●				
		11T302MR/L-FSF	< 0.2																				●				
	Sharp Edge / Precision	11T304MR/L-FSF	< 0.4																				●				
		DCGT 070202R/L-FS	0.2			●																					
		070204R/L-FS	0.4			●																					
		DCGT 11T302R/L-FS	0.2			●																					
		11T304R/L-FS	0.4			●																					
	Finishing / Medium	11T308R/L-FS	0.8			●																					

・Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05**, **<0.1**, **<0.2** etc.) indicate models with minus tolerance for corner R(rε).

Description	Ref. Page for Toolholder
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For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page **B75**

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55°Diamond • Positive with Hole

(mm)

Description	A	T	ød	α
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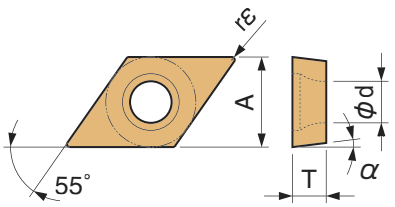
DC_11T3_	9.525	3.97	4.4	7°



		TN6010	TN6020	TN60	PV7005	PV7010	PV7020	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PR930	PR1005	PR1025	PR1125	KW10
P	Free-cutting steel																			●			
P	Carbon Steel and Alloy Steel		○				○												◔		◕		
M	Stainless Steel																		◔		◕		
K	Gray Cast Iron																						✱
K	Nodular Cast Iron																						
N	Non-ferrous Metals																						◕
S	Heat-resistant alloy																						
S	Titanium Alloy																						◕
H	Hard Materials																						

Classification of usage
✱: Interruption / 1st Choice
✱: Interruption / 2nd Choice
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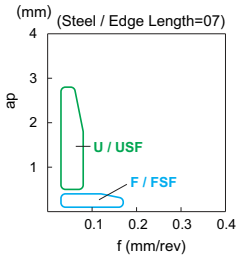
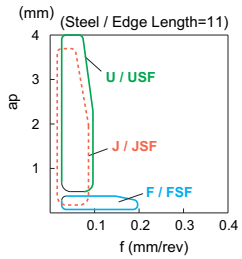
(In case hardness is under 45HRC)

Insert (Handed Insert shows Left-hand)	Description	Dim. (mm) rε	TN6010	TN6020	TN60	PV7005	PV7010	PV7020	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PR930	PR1005	PR1025	PR1125	KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Low Feed, Sharp Edge	DCGT 0702003F R/L-U	0.03			●															●				●	Refer to the table below	
	DCGT 070201F R/L-U	0.1		●	●			●												●				●		
	DCGT 070202F R/L-U	0.2		●	●			●												●						
	DCGT 11T3003F R/L-U	0.03			●															●				R		
	DCGT 11T301F R/L-U	0.1			●															●				●		
	DCGT 11T302F R/L-U	0.2		●	●			●												●				●		
	DCGT 0702003MF R/L-U	< 0.03																			●	●				
	DCGT 0702005MF R/L-U	< 0.05																			●	●				
	DCGT 070201MF R/L-U	< 0.1																			●	●				
	DCGT 070202MF R/L-U	< 0.2																			●	●				
	DCGT 070204MF R/L-U	< 0.4																			●	●				
	DCGT 11T3005MF R/L-U	< 0.05																			●	●				
	DCGT 11T301MF R/L-U	< 0.1																			●	●				
	DCGT 11T302MF R/L-U	< 0.2																			●	●				
	DCGT 11T304MF R/L-U	< 0.4																			●	●				
Low Feed, Super Fine, Sharp Edge / Precision	DCET 0702003F R/L-USF	0.03																		●						
	DCET 070201F R/L-USF	0.1			●															●						
	DCET 070202F R/L-USF	0.2			●															●						
	DCET 11T3003F R/L-USF	0.03			R															●						
	DCET 11T301F R/L-USF	0.1			●															●						
	DCET 11T302F R/L-USF	0.2			●															●						
	DCET 0702005MF R/L-USF	< 0.05																				●				
	DCET 070201MF R/L-USF	< 0.1																				●				
	DCET 070202MF R/L-USF	< 0.2																				●				
	DCET 11T3005MF R/L-USF	< 0.05																				●				
	DCET 11T301MF R/L-USF	< 0.1																				●				
	DCET 11T302MF R/L-USF	< 0.2																				●				
Low Feed, With Honing	DCGT 070201E R/L-U	0.1																		●						
	DCGT 070202E R/L-U	0.2		●	●			●												●						
	DCGT 070204E R/L-U	0.4		●	●			●												●						
	DCGT 11T301E R/L-U	0.1																		●						
	DCGT 11T302E R/L-U	0.2		●	●			●												●						
	DCGT 11T304E R/L-U	0.4		●	●			●												●						
	DCGT 070201ME R/L-U	< 0.1																				●				
	DCGT 070202ME R/L-U	< 0.2																				●				
	DCGT 070204ME R/L-U	< 0.4																				●				
	DCGT 11T301ME R/L-U	< 0.1																				●				
	DCGT 11T302ME R/L-U	< 0.2																				●				
	DCGT 11T304ME R/L-U	< 0.4																				●				





・Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05**, **<0.1**, **<0.2** etc.) indicate models with minus tolerance for corner R(rε).

Description	Ref. Page for Toolholder
DC..07 type	**E14~17,E19~21,F29,F51~52**
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DC_0702_	6.35	2.38	2.8	11°
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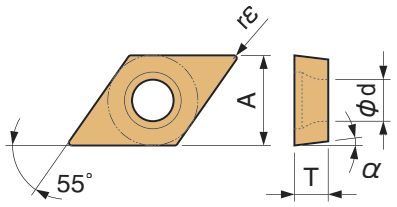

		Free-cutting steel	Carbon Steel and Alloy Steel	Stainless Steel	Gray Cast Iron	Nodular Cast Iron	Non-ferrous Metals	Heat-resistant alloy	Titanium Alloy	Hard Materials
P		●	○	●						
M		○		●						
K					✱					
N							●			
S									●	
H										

Classification of usage
✱: Interruption / 1st Choice
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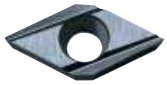
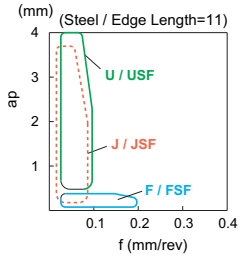
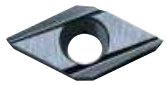
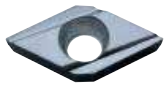
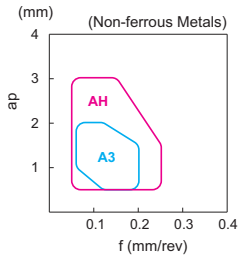
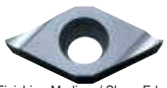
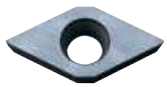
(In case hardness is under 45HRC)

Insert (Handed Insert shows Left-hand)		Description		Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Low Feed	 Sharp Edge	DCGT	11T3003F R/L-J	0.03																		●						Refer to the table below	
			11T301F R/L-J	0.1			●															●				●			
			11T302F R/L-J	0.2			●															●				●			
		DCGT	11T3005MF R/L-J	< 0.05																			●	●					
			11T301MF R/L-J	< 0.1																			●	●					
			11T302MF R/L-J	< 0.2																			●	●					
			11T304MF R/L-J	< 0.4																			●	●					
Low Feed	Super Fine  Sharp Edge / Precision	DCET	11T3003F R/L-JSF	0.03																		●							
			11T301F R/L-JSF	0.1			●															●							
			11T302F R/L-JSF	0.2			●															●							
		DCET	11T3005MF R/L-JSF	< 0.05																				●					
			11T301MF R/L-JSF	< 0.1																				●					
			11T302MF R/L-JSF	< 0.2																				●					
Low Feed	 With Honing	DCGT	11T3003E R/L-J	0.03																		●					●		
			11T301E R/L-J	0.1			●															●					●		
			11T302E R/L-J	0.2			●															●					●		
			11T304E R/L-J	0.4		●	●															●					●		
		DCGT	11T3005ME R/L-J	< 0.05																				●					
			11T301ME R/L-J	< 0.1																				●					
			11T302ME R/L-J	< 0.2																				●					
			11T304ME R/L-J	< 0.4																				●					
Non-ferrous Metals	Finishing-Medium / Sharp Edge	DCGT	11T304AH	0.4																							●		
			11T308AH	0.8																							●		
		DCGT	070202 R/L-A3	0.2																							R		
Non-ferrous	 Finishing-Medium / Sharp Edge	DCGT	11T302 R/L-A3	0.2																							●		
			11T304 R/L-A3	0.4																							●		
Cast Iron	 Without Chipbreaker	DCGW	070201	0.1																							●		—
			070202	0.2																							●		
		DCGW	11T301	0.1																							●		
			11T302	0.2																							●		
			11T304	0.4																							●		

・Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05**, **<0.1**, **<0.2** etc.) indicate models with minus tolerance for corner R(rε).

Description	Ref. Page for Toolholder
DC..07 type	**E14~17,E19~21,F29,F51~52**
DC..11 type	**E14~17,E19~21,F29,F44,F51~52**

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page **B75**

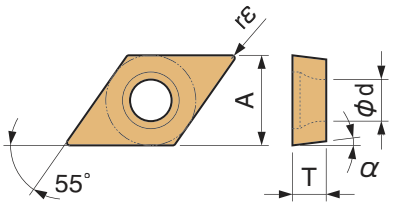
● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

55°Diamond • Positive with Hole

(mm)

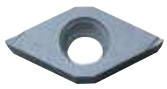
Description	A	T	ød	α
DP_0702_	6.35	2.38	2.8	11°
DP_11T3_	9.525	3.97	4.4	11°

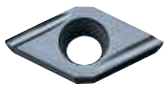


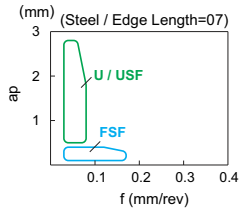
P	Free-cutting steel	
	Carbon Steel and Alloy Steel	◌ ●
M	Stainless Steel	◌ ●
K	Gray Cast Iron	
	Nodular Cast Iron	
N	Non-ferrous Metals	
S	Heat-resistant alloy	
	Titanium Alloy	
H	Hard Materials	

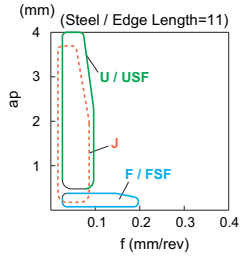
Classification of usage
✱: Interruption / 1st Choice
: Interruption / 2nd Choice
●: Light Interruption / 1st Choice
◌: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

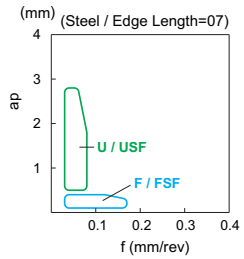
Insert (Handed Insert shows Left-hand)	Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Finishing, Super Fine	DPET 0702003R/L-FSF	0.03																		●					E16	
	DPET 070201R/L-FSF	0.1			●															●						
	DPET 070202R/L-FSF	0.2			●															●						
	DPET 11T3003R/L-FSF	0.03																		●						
	DPET 11T301R/L-FSF	0.1			●															●						
	DPET 11T302R/L-FSF	0.2			●															●						
	DPET 0702005MR/L-FSF	< 0.05																				●				
	DPET 070201MR/L-FSF	< 0.1																				●				
	DPET 070202MR/L-FSF	< 0.2																				●				
	DPET 11T3005MR/L-FSF	< 0.05																				●				
	DPET 11T301MR/L-FSF	< 0.1																				●				
Sharp Edge / Precision	DPET 11T302MR/L-FSF	< 0.2																				●				
Low Feed, Super Fine	DPET 0702003FR/L-USF	0.03																		●						
	DPET 070201FR/L-USF	0.1			●															●						
	DPET 070202FR/L-USF	0.2			●															●						
	DPET 11T3003FR/L-USF	0.03																		●						
	DPET 11T301FR/L-USF	0.1			●															●						
	DPET 11T302FR/L-USF	0.2			●															●						
	DPET 0702005MFR/L-USF	< 0.05																				●				
	DPET 070201MFR/L-USF	< 0.1																				●				
	DPET 070202MFR/L-USF	< 0.2																				●				
	DPET 11T3005MFR/L-USF	< 0.05																				●				
	DPET 11T301MFR/L-USF	< 0.1																				●				
Sharp Edge / Precision	DPET 11T302MFR/L-USF	< 0.2																				●				

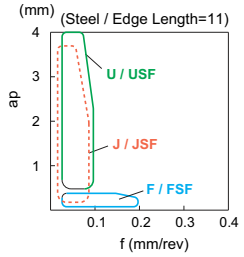












・Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05**, **<0.1**, **<0.2** etc.) indicate models with minus tolerance for corner R(rε).

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B75

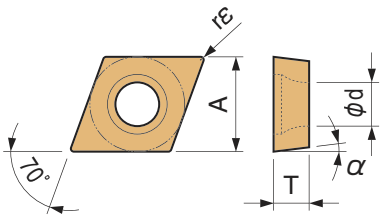
Inserts are sold in 10 piece boxes.

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

70°Diamond • Positive with Hole

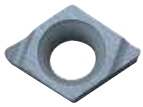
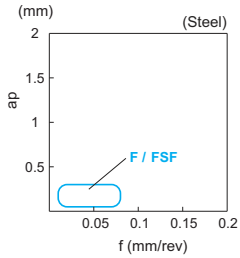
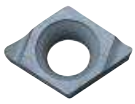
(mm)

Description	A	T	ød	α
JC_0301_	3.5	1.4	1.9	7°



P	Free-cutting steel
	Carbon Steel and Alloy Steel
M	Stainless Steel
K	Gray Cast Iron
	Nodular Cast Iron
N	Non-ferrous Metals
S	Heat-resistant alloy
	Titanium Alloy
H	Hard Materials

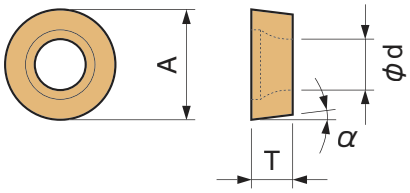
Classification of usage
✖: Interruption / 1st Choice
✱: Interruption / 2nd Choice
◓: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

	Insert (Handed Insert shows Left-hand)	Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Finishing		JCGT 030101R/L-F	0.1			●															●				●	F53	
		JCGT 030102R/L-F	0.2			●															●				●		
		JCGT 030104R/L-F	0.4			●															●				●		
		JCGT 030101MR/L-F	< 0.1																				●				
		JCGT 030102MR/L-F	< 0.2																				●				
		JCGT 030104MR/L-F	< 0.4																				●				
Finishing	Super Fine  Sharp Edge / Precision	JCET 030101R/L-FSF	0.1			●															●						
		JCET 030102R/L-FSF	0.2			●															●						
		JCET 030104R/L-FSF	0.4			●															●						
		JCET 030101MR/L-FSF	< 0.1																				●				
		JCET 030102MR/L-FSF	< 0.2																				●				
		JCET 030104MR/L-FSF	< 0.4																				●				

Round • Positive with Hole

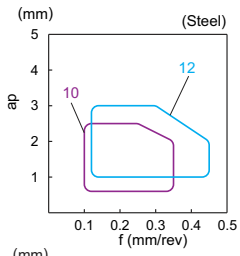
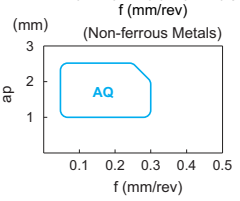
(mm)

Description	A	T	ød	α
RC_1003_	10.0	3.18	3.6	7°
RC_1204_	12.0	4.76	4.2	7°



P	Free-cutting steel
	Carbon Steel and Alloy Steel
M	Stainless Steel
K	Gray Cast Iron
	Nodular Cast Iron
N	Non-ferrous Metals
S	Heat-resistant alloy
	Titanium Alloy
H	Hard Materials

Classification of usage
✖: Interruption / 1st Choice
✱: Interruption / 2nd Choice
◓: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

	Insert	Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Medium		RCMX 1003M0	-		●	●			●	●	●	●			●											D19	
		RCMX 1204M0	-		●	●			●	●	●	●			●		●	●	○	○							
Non-ferrous Metals	Finishing-Medium	RCGX 1003M0-AQ	-																						●		

For grades (TN30 PV30 PV60 PV90 PR905 PR915), See Page B75

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

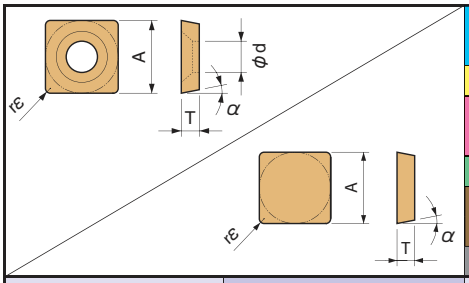
90°Square • Positive with Hole / without Hole

(mm)

Description	A	T	ød	α
SC_09T3_	9.525	3.97	4.4	7°
SP_0903_	9.525	3.18	4.5	11°
SP_1203_	12.7	3.18	5.5	11°

(mm)

Description	A	T	ød	α
SP_0903_	9.525	3.18	-	11°
SP_1203_	12.7	3.18	-	11°
SP_1204_	12.7	4.76	-	11°

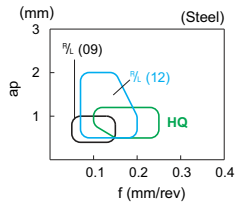


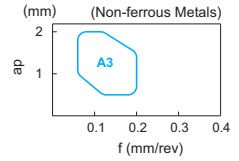
		Free-cutting steel	Carbon Steel and Alloy Steel	Stainless Steel	Gray Cast Iron	Nodular Cast Iron	Non-ferrous Metals	Heat-resistant alloy	Titanium Alloy	Hard Materials
P			●			●				
M				◓						
K					◎	◎				
N									◓	
S				◔				◔	◓	
H										

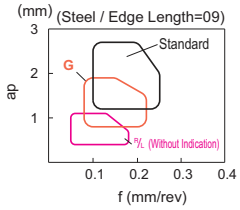
Classification of usage
✖: Interruption / 1st Choice
✖: Interruption / 2nd Choice
◓: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

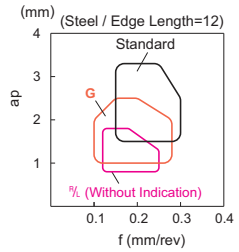
Insert (Handed Insert shows Left-hand)		Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder
Finishing-Medium		SCMT 09T304HQ	0.4	●		●		●			●	●	●														-
		SCMT 09T308HQ	0.8	●		●		●			●	●	●														
Non-ferrous Metals	Finishing-Medium / Sharp Edge	SCGT 09T304R/L-A3	0.4																						●	-
		SCGT 09T308R/L-A3	0.8																						●	
Finishing		SPGH 090304R/L	0.4			L																				F60
		SPGH 090308R/L	0.8			L																				
		SPGH 120304R/L	0.4			L																				
		SPGH 120308R/L	0.8			L																				
Medium		SPMR 090304G	0.4			●																				E28 F60
		SPMR 090308G	0.8			●																				
		SPMR 120304G	0.4			●																				
		SPMR 120308G	0.8			●																				
Medium		SPMR 090304	0.4								●	●			●									●		
		SPMR 090308	0.8								●	●			●									●		
		SPMR 120304	0.4								●	●			●									●		
		SPMR 120308	0.8								●	●			●									●		
Finishing		SPGR 090304R/L	0.4			●	●																			
		SPGR 090308R/L	0.8			●																				
		SPGR 120304R/L	0.4			●																				
		SPGR 120308R/L	0.8			●	●																			
Cast Iron		SPGN 090304	0.4				●																		●	
		SPGN 090308	0.8				●																		●	
		SPGN 120304	0.4				●																		●	
		SPGN 120308	0.8			●	●																		●	
		SPMN 120304	0.4							●							●	●		○						
		SPMN 120308	0.8			●				●							●	●	○	○						
		SPMN 120312	1.2			●																				
		SPMN 120408	0.8														●	●		○						-
		SPMN 120412	1.2														●	●		○						
	Without Chipbreaker	SPUN 090308	0.8								●					●		●								E28 F60

Applicable Chipbreaker Range









For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B75

Inserts are sold in 10 piece boxes.

 ● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

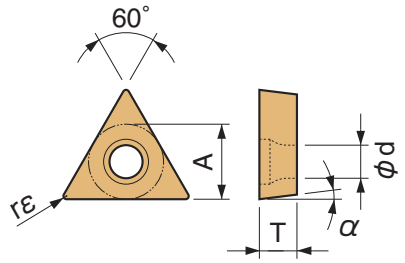
60°Triangle • Positive with Hole

(mm)

Description	A	T	ød	α
TB_0601_	3.97	1.59	2.3	5°
TC_0902_	5.56	2.38	2.5	7°

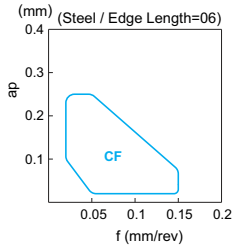
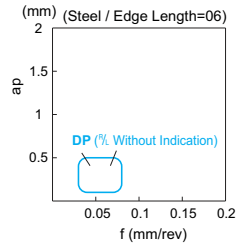
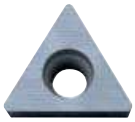
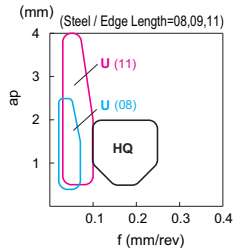
(mm)

Description	A	T	ød	α
TC_1102_	6.35	2.38	2.8	7°
TC_1103_	6.35	3.18	2.8	7°
TC_16T3_	9.525	3.97	4.4	7°



P																								Free-cutting steel
	●	○			●	○		●	✖	✖									◔		◕				Carbon Steel and Alloy Steel
M																			◔		◕				Stainless Steel
K																								✖	Gray Cast Iron
																									Nodular Cast Iron
N																								◕	Non-ferrous Metals
S																									Heat-resistant alloy
																								◕	Titanium Alloy
H																									Hard Materials

Classification of usage
✖: Interruption / 1st Choice
✖: Interruption / 2nd Choice
◕: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

Insert (Handed Insert shows Left-hand)		Description		Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Minute ap	Sharp Edge	TBGT	060102CF	0.2																		●						F33 F55 F58	
		TBGT	060101M-CF	< 0.1																			●	●					
			060102M-CF	< 0.2																			●	●					
Minute ap	Sharp Edge / Polished Surface	TBGT	060101MP-CF	< 0.1																				●					
			060102MP-CF	< 0.2																				●					
Finishing		TBMT	060102DP	0.2		●	●			●		●	●																
			060104DP	0.4		●	●			●		●	●									●							
Finishing		TBGT	0601003R/L	0.03																		●							
			060101R/L	0.1			●															●					●		
			060102R/L	0.2		L	●			L												●					●		
			060104R/L	0.4		L	●			L												●					●		
		TBGT	0601005MR/L	< 0.05																			●	●					
			060101MR/L	< 0.1																			●	●					
			060102MR/L	< 0.2																			●	●					
			060104MR/L	< 0.4																			●	●					
Cast Iron	 Without Chipbreaker	TBGW	060102	0.2			●																				●		
			060104	0.4			●																				●		
Finishing-Medium		TCMT	090202HQ	0.2	●		●		●				●															F34	
			090204HQ	0.4	●		●		●				●																
		TCMT	110202HQ	0.2	●		●		●				●									●							
			110204HQ	0.4	●	●	●		●			●	●	●				●	●		○	●							
			110208HQ	0.8	●	●	●		●			●	●	●				●	●		○								
		TCMT	16T304HQ	0.4			●					●	●									●						-	
			16T308HQ	0.8			●					●	●					●	●		○	●							
			16T312HQ	1.2								●	●					●	●		○								
Finishing		TCGT	110201R/L	0.1			●																					F34	—
			110202R/L	0.2			●																						
			110204R/L	0.4			●																						

・Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05**, **<0.1**, **<0.2** etc.) indicate models with minus tolerance for corner R(rε).

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B76

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

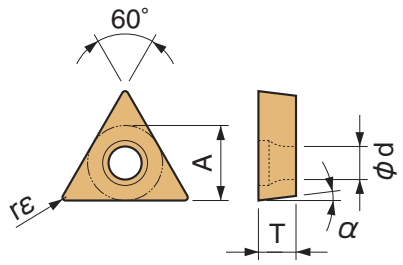
60°Triangle • Positive with Hole / without Hole

(mm)

Description	A	T	ød	α
TB_0601_	3.97	1.59	2.3	5°
TC_0802_	4.76	2.38	2.3	7°

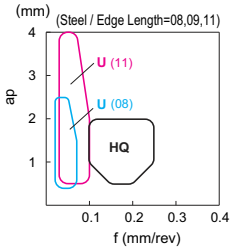
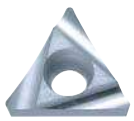
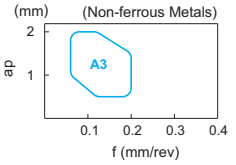
(mm)

Description	A	T	ød	α
TC_0902_	5.56	2.38	2.5	7°
TC_1102_	6.35	2.38	2.8	7°
TC_1103_	6.35	3.18	2.8	7°



P	Free-cutting steel	●
P	Carbon Steel and Alloy Steel	○ ●
M	Stainless Steel	○ ●
K	Gray Cast Iron	✱
K	Nodular Cast Iron	
N	Non-ferrous Metals	●
S	Heat-resistant alloy	
S	Titanium Alloy	●
H	Hard Materials	

Classification of usage
✱: Interruption / 1st Choice
✱: Interruption / 2nd Choice
●: Light Interruption / 1st Choice
○: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

Insert (Handed Insert shows Left-hand)	Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Low Feed Sharp Edge	TCGT 0802003F R/L-U	0.03																		●					E22	
	TCGT 080201F R/L-U	0.1			●															●				●		
	TCGT 080202F R/L-U	0.2		R	●															●				●		
	TCGT 1103003F R/L-U	0.03																		●				R	E22	
	TCGT 110301F R/L-U	0.1			●															●				●	F34	
	TCGT 110302F R/L-U	0.2		R	●															●				●		
	TCGT 0802005MF R/L-U	< 0.05																			●	●			E22	
	TCGT 080201MF R/L-U	< 0.1																			●	●				
	TCGT 080202MF R/L-U	< 0.2																			●	●				
	TCGT 1103005MF R/L-U	< 0.05																			●	●			E22	
	TCGT 110301MF R/L-U	< 0.1																			●	●			F34	
	TCGT 110302MF R/L-U	< 0.2																			●	●				
	TCGT 110304MF R/L-U	< 0.4																			●	●				
Low Feed Super Fine / Sharp Edge / Precision	TCET 0802003F R/L-USF	0.03																		●					E22	
	TCET 080201F R/L-USF	0.1			●															●						
	TCET 080202F R/L-USF	0.2			●															●						
	TCET 1103003F R/L-USF	0.03																		●					E22	
	TCET 110301F R/L-USF	0.1			●															●					F34	
	TCET 110302F R/L-USF	0.2			●															●						
	TCET 0802005MF R/L-USF	< 0.05																				●			E22	
	TCET 080201MF R/L-USF	< 0.1																				●				
	TCET 080202MF R/L-USF	< 0.2																				●				
	TCET 1103005MF R/L-USF	< 0.05																				●			E22	
	TCET 110301MF R/L-USF	< 0.1																				●			F34	
	TCET 110302MF R/L-USF	< 0.2																				●				
Low Feed With Honing	TCGT 080201E R/L-U	0.1			●															●					E22	
	TCGT 080202E R/L-U	0.2			●															●						
	TCGT 110301E R/L-U	0.1		●	●															●					E22	
	TCGT 110302E R/L-U	0.2		●	●															●					F34	
	TCGT 110304E R/L-U	0.4		●	●															●						
	TCGT 080201ME R/L-U	< 0.1																				●			E22	
	TCGT 080202ME R/L-U	< 0.2																				●				
	TCGT 110301ME R/L-U	< 0.1																				●			E22	
	TCGT 110302ME R/L-U	< 0.2																				●			F34	
	TCGT 110304ME R/L-U	< 0.4																				●				
Non-ferrous Metals  Finishing-Medium / Sharp Edge	TCGT 110302 R/L-A3	0.2																						●	E22	
	TCGT 110304 R/L-A3	0.4																						●	F34	
Cast Iron Without Chipbreaker	TCGW 080201	0.1																						●	E22	—
	TCGW 080202	0.2																						●		
	TCGW 110301	0.1																						●	E22	
	TCGW 110302	0.2																						●	F34	
	TCGW 110304	0.4																						●		

・Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05**, **<0.1**, **<0.2** etc.) indicate models with minus tolerance for corner R(rε).

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B76

Inserts are sold in 10 piece boxes.

 ● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

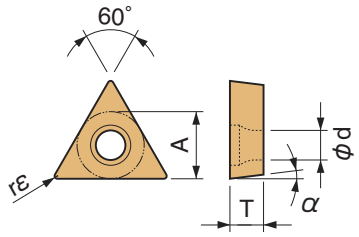
60°Triangle • Positive with Hole

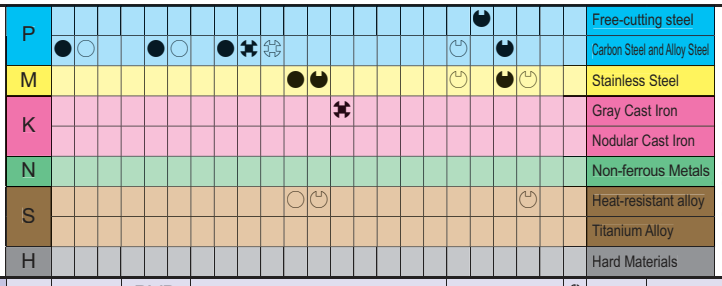
(mm)

Description	A	T	ød	α
TP_0802_	4.76	2.38	2.3	11°
TPMT0902_	5.56	2.38	2.8	11°
TP_0902	5.56	2.38	3.0	11°
TP_1102	6.35	2.38	3.5	11°

(mm)

Description	A	T	ød	α
TP_1103_	6.35	3.18	3.3	11°
TPMT1603_	9.525	3.18	4.4	11°
TP_1603_	9.525	3.18	4.5	11°
TP_1604_	9.525	4.76	4.4	11°





Classification of usage
✖: Interruption / 1st Choice
✖: Interruption / 2nd Choice
●: Light Interruption / 1st Choice
○: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

	Insert	Description		Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Minute ap	Sharp Edge	TPGT	080202CF	0.2																		●					E22 F55 F58	(mm) (Steel / Edge Length=08,09) XP (GP) CF ap f (mm/rev)
		TPGT	090202CF	0.2																		●					F33 F55 F58	
		TPGT	080201M-CF 080202M-CF	< 0.1 < 0.2																			● ●	● ●			E22 F55 F58	
		TPGT	090201M-CF 090202M-CF	< 0.1 < 0.2																			● ●	● ●			F33 F55 F58	
Minute ap	Sharp Edge / Polished Surface	TPGT	080201MP-CF 080202MP-CF	< 0.1 < 0.2																				● ●			E22 F55 F58	
		TPGT	090201MP-CF 090202MP-CF	< 0.1 < 0.2																				● ●			F33 F55 F58	(mm) (Steel / Edge Length=08,09) HQ XP (GP) ap f (mm/rev)
Finishing		TPMT	090202GP 090204GP	0.2 0.4	● ●	● ●	● ●		● ●	● ●		● ●	● ●									● ●		● ●				
		TPMT	110304GP 110308GP	0.4 0.8	● ●	● ●	● ●		● ●	● ●		● ●	● ●									● ●		● ●			E22 F33 F55 F57	
		TPMT	160304GP	0.4	●	●	●		●	●		●	●									●		●			F33 F55 F57	
Finishing-Medium		TPMT	090202HQ 090204HQ	0.2 0.4	● ●	● ●	● ●		● ●	● ●		● ●	● ●	● ●	● ●	● ●						● ●		● ●	● ●		F33 F55 F58	
		TPMT	110302HQ 110304HQ 110308HQ	0.2 0.4 0.8	● ● ●	● ● ●	● ● ●		● ● ●	● ● ●		● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●				○ ○	○ ○	● ● ●		● ● ●	● ● ●		E22 F33 F55 F57	(mm) (Steel / Edge Length=11) XQ HQ XP (GP) ap f (mm/rev)
		TPMT	160302HQ 160304HQ 160308HQ	0.2 0.4 0.8	● ● ●	● ●	● ● ●		● ● ●	● ●		● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●				○ ○	● ● ●		● ● ●	● ● ●		F33 F55 F57	
Low Carbon Steel	Finishing	TPMT	090204XP	0.4		●			● ●	● ●		● ●	● ●									● ●		● ●			F33 F55 F58	
		TPMT	110304XP 110308XP	0.4 0.8	● ●	● ●			● ●	● ●		● ●	● ●									● ●		● ●			E22 F33 F55 F57	
		TPMT	160304XP 160308XP	0.4 0.8		● ●			● ●	● ●		● ●	● ●									● ●					F33 F55 F57	(mm) (Steel / Edge Length=16) XQ HQ XP (GP) ap f (mm/rev)
Low Carbon Steel	Finishing-Medium	TPMT	110304XQ 110308XQ	0.4 0.8	● ●	● ●			● ●	● ●		● ●	● ●														E22 F33 F55 F57	
		TPMT	160304XQ 160308XQ	0.4 0.8		● ●			● ●	● ●		● ●	● ●														F33 F55 F57	

・Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05**, **<0.1**, **<0.2** etc.) indicate models with minus tolerance for corner R(rε).

For grades { TN30 PV60 PR905 / PV30 PV90 PR915 } , See Page ➡ **B76**

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

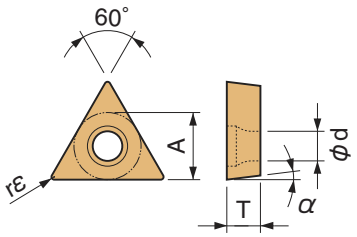
60°Triangle • Positive with Hole

(mm)

Description	A	T	ød	α
TP_0802_	4.76	2.38	2.3	11°
TP_0902	5.56	2.38	3.0	11°
TP_1102	6.35	2.38	3.5	11°

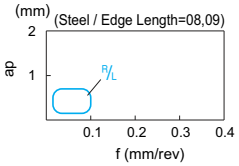
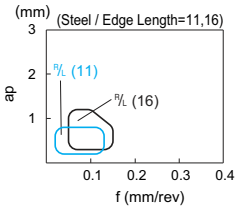
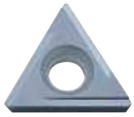
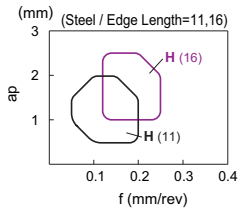
(mm)

Description	A	T	ød	α
TP_1103_	6.35	3.18	3.3	11°
TP_1603_	9.525	3.18	4.5	11°
TP_1604_	9.525	4.76	4.4	11°



P																							Free-cutting steel
	●	○				○											◐	◓					Carbon Steel and Alloy Steel
M																	◐	◓					Stainless Steel
K				●																		✱	Gray Cast Iron
																							Nodular Cast Iron
N																						◓	Non-ferrous Metals
S																							Heat-resistant alloy
																						◓	Titanium Alloy
H																							Hard Materials

Classification of usage
✱: Interruption / 1st Choice
✱: Interruption / 2nd Choice
◓: Light Interruption / 1st Choice
◐: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

	Insert (Handed Insert shows Left-hand)	Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Finishing		TPGH 080201R/L	0.1			●															●				●	E22	
		TPGH 080202R/L	0.2	L	●	●	●		●												●				●	F55	
		TPGH 080204R/L	0.4	L	●	●	●		●												●				●	F58	
		TPGH 090201R/L	0.1			●															●				●	F33	
		TPGH 090202R/L	0.2	L	●	●	●		●												●				●	F55	
		TPGH 090204R/L	0.4	L	●	●	●		●												●				●	F58	
		TPGH 110202R/L	0.2	L		●															●				●	F57	
		TPGH 110204R/L	0.4	L		●	●														●				●		
		TPGH 110302R/L	0.2	L	●	●	●		●												●				●	E22	
		TPGH 110304R/L	0.4	L	●	●	●		●												●				●	F33	
		TPGH 110308R/L	0.8	L		●															●				●	F55	
																										F57	
		TPGH 160302R/L	0.2	L		●															●				●	F33	
		TPGH 160304R/L	0.4	L	●	●	●		L												●				●	F55	
		TPGH 160308R/L	0.8			●	●														●				●	F57	
		TPGH 080201MR/L	< 0.1																			●	●			E22	
		TPGH 080202MR/L	< 0.2																			●	●			F55	
		TPGH 080204MR/L	< 0.4																			●	●			F58	
		TPGH 090201MR/L	< 0.1																			●	●			F33	
		TPGH 090202MR/L	< 0.2																			●	●			F55	
		TPGH 090204MR/L	< 0.4																			●	●			F58	
		TPGH 110202MR/L	< 0.2																			●	●			F57	
		TPGH 110204MR/L	< 0.4																			●	●				
		TPGH 110302MR/L	< 0.2																			●	●			E22	
		TPGH 110304MR/L	< 0.4																			●	●			F33	
		TPGH 110308MR/L	< 0.8																			●	●			F55	
																										F57	
		TPGH 160302MR/L	< 0.2																			●	●			F33	
		TPGH 160304MR/L	< 0.4																			●	●			F55	
		TPGH 160308MR/L	< 0.8																			●	●			F57	
Medium		TPGH 110302R/L-H	0.2	L	L	●			L												●				●	E22	
		TPGH 110304R/L-H	0.4	L	●	●			●												●				●	F33	
		TPGH 110308R/L-H	0.8	L	L	●			L												●				●	F55	
																										F57	
		TPGH 160304R/L-H	0.4	L	L	●			L												●				●	F33	
		TPGH 160308R/L-H	0.8			●															●				●	F55	
																										F57	
		TPGT 160402R/L-H	0.2			L																				-	
		TPGT 160404R/L-H	0.4			L																					
		TPGT 160408R/L-H	0.8			L																					
		TPGH 110302MR/L-H	< 0.2																				●			E22	
		TPGH 110304MR/L-H	< 0.4																				●			F33	
		TPGH 110308MR/L-H	< 0.8																				●			F55	
																										F57	
		TPGH 160304MR/L-H	< 0.4																				●			F33	
		TPGH 160308MR/L-H	< 0.8																				●			F57	

・Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05**, **<0.1**, **<0.2** etc.) indicate models with minus tolerance for corner R(rε).

For grades (TN30 PV30 PV60 PV90 PR905 PR915), See Page B76

Inserts are sold in 10 piece boxes.

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

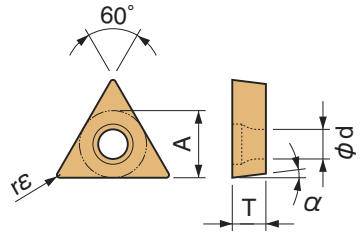
60°Triangle • Positive with Hole

(mm)

Description	A	T	ød	α
TP_0802_	4.76	2.38	2.3	11°
TP_1103_	6.35	3.18	3.3	11°

(mm)

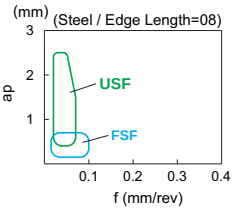
Description	A	T	ød	α
TPGN0902_	5.56	2.38	-	11°
TP_N1103_	6.35	3.18	-	11°
TP_N1603_	9.525	3.18	-	11°

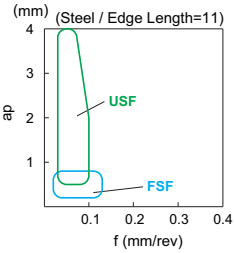


P																							Free-cutting steel
			○				○											◐	◓				Carbon Steel and Alloy Steel
M																		◐	◓				Stainless Steel
K					●																	✱	Gray Cast Iron
																							Nodular Cast Iron
N																						◓	Non-ferrous Metals
S																							Heat-resistant alloy
																						◓	Titanium Alloy
H																							Hard Materials

Classification of usage
✱: Interruption / 1st Choice
✱: Interruption / 2nd Choice
◓: Light Interruption / 1st Choice
◐: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

Insert (Handed Insert shows Left-hand)	Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125		Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Finishing, Super Fine	TPET 0802003R/L-FSF	0.03																		●						E22	
	TPET 080201R/L-FSF	0.1			●															●						F55	
	TPET 080202R/L-FSF	0.2			●															●						F58	
	TPET 1103003R/L-FSF	0.03																		●						E22	
	TPET 110301R/L-FSF	0.1			●															●						F33	
	TPET 110302R/L-FSF	0.2			●															●						F55	
																										F57	
	TPET 0802005MR/L-FSF	< 0.05																				●				E22	
	TPET 080201MR/L-FSF	< 0.1																				●				F55	
	TPET 080202MR/L-FSF	< 0.2																				●				F58	
	TPET 1103005MR/L-FSF	< 0.05																				●				E22	
	TPET 110301MR/L-FSF	< 0.1																				●				F33	
	TPET 110302MR/L-FSF	< 0.2																				●				F55	
Sharp Edge / Precision																										F57	
Finishing, Super Fine	TPET 0802003FR/L-USF	0.03																		●						E22	
	TPET 080201FR/L-USF	0.1			●															●						F55	
	TPET 080202FR/L-USF	0.2			●															●						F58	
	TPET 1103003FR/L-USF	0.03																		●						E22	
	TPET 110301FR/L-USF	0.1			●															●						F33	
	TPET 110302FR/L-USF	0.2			●															●						F55	
																										F57	
	TPET 0802005MFR/L-USF	< 0.05																				●				E22	
	TPET 080201MFR/L-USF	< 0.1																				●				F55	
	TPET 080202MFR/L-USF	< 0.2																				●				F58	
	TPET 1103005MFR/L-USF	< 0.05																				●				E22	
	TPET 110301MFR/L-USF	< 0.1																				●				F33	
	TPET 110302MFR/L-USF	< 0.2																				●				F55	
Sharp Edge / Precision																										F57	
Cast Iron	TPGB 080202	0.2		●	●			●																	●	E22	
	TPGB 080204	0.4		●	●			●																	●	F55	
	TPGB 080208	0.8			●																					F58	
	TPGB 090202	0.2			●																				●	F33	
	TPGB 090204	0.4		●	●	●		●																	●	F55	
																										F58	
	TPGB 1102005	0.05			●																				●		
	TPGB 110201	0.1			●																				●		
	TPGB 110202	0.2			●																				●	F57	
	TPGB 110204	0.4			●																				●		
	TPGB 1103005	0.05			●																				●		
	TPGB 110301	0.1			●																				●	E22	
	TPGB 110302	0.2		●	●			●																	●	F33	
	TPGB 110304	0.4		●	●	●		●																	●	F55	
	TPGB 110308	0.8		●	●	●		●																	●	F57	
	TPGB 160304	0.4			●	●																			●	F33	
Without Chipbreaker	TPGB 160308	0.8			●																				●	F55	
																										F57	





・Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05**, **<0.1**, **<0.2** etc.) indicate models with minus tolerance for corner R(rε).

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B76

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

Turning Indexable Inserts

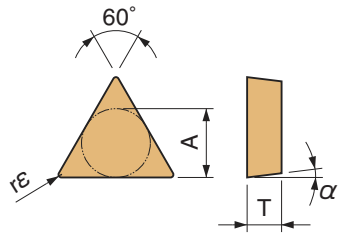
60°Triangle • Positive without Hole

(mm)

Description	A	T	ød	α
TC_0601_	3.97	1.59	-	7°

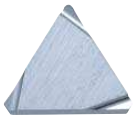
(mm)

Description	A	T	ød	α
TPGN0902_	5.56	2.38	-	11°
TP_N1103_	6.35	3.18	-	11°
TP_N1603_	9.525	3.18	-	11°

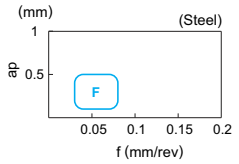


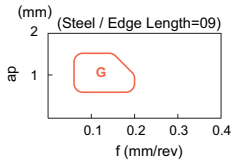
		TN6010	TN6020	TN60	PV7005	PV7010	PV7020	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PR930	PR1005	PR1025	PR1125	KW10
P	Free-cutting steel																						
P	Carbon Steel and Alloy Steel	●	○			●	○	○	●	✖	✧												
M	Stainless Steel												◓								◔		
K	Gray Cast Iron				●			✧						✖									✧
K	Nodular Cast Iron							◔							●	✖							
N	Non-ferrous Metals																						◓
S	Heat-resistant alloy												◔								◔		
S	Titanium Alloy																						◓
H	Hard Materials																						

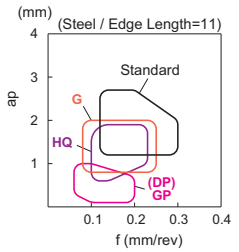
Classification of usage
✖: Interruption / 1st Choice
✧: Interruption / 2nd Choice
◓: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

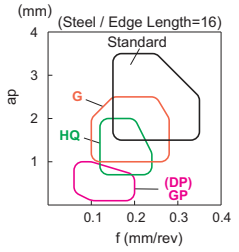
Insert (Handed Insert shows Left-hand)	Description	Dim. (mm) rε	TN6010	TN6020	TN60	PV7005	PV7010	PV7020	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PR930	PR1005	PR1025	PR1125	KW10	Ref. Page for Toolholder
Finishing 	TCGR 060102R/L-F	0.2			●																				-
	TCGR 060104R/L-F	0.4			●																				
Cast Iron Without Chipbreaker	TCGN 060102	0.2			●																			●	-
	TCGN 060104	0.4			●																			●	
Finishing	TPMR 110304DP	0.4			●																				E29 F61
	TPMR 110308DP	0.8			●																				
	TPMR 160304DP	0.4			●																				
	TPMR 160308DP	0.8			●																				
Finishing	TPMR 110304GP	0.4		●	●			●																	
	TPMR 160304GP	0.4		●	●			●		●	●														
Finishing-Medium	TPMR 110304HQ	0.4			●					●	●	●		●								●			
	TPMR 110308HQ	0.8			●					●	●	●		●								●			
	TPMR 160304HQ	0.4	●		●		●			●	●	●		●								●			
	TPMR 160308HQ	0.8	●		●		●			●	●	●		●								●			
Medium	TPMR 090202G	0.2			●																				F61
	TPMR 090204G	0.4			●					●	●														
	TPMR 110304G	0.4			●																				E29 F61
	TPMR 110308G	0.8			●																				
	TPMR 160304G	0.4			●																				
	TPMR 160308G	0.8			●																				
Medium	TPMR 110304	0.4			●				●	●	●			●	●	●	●		○			●		
	TPMR 110308	0.8			●				●	●	●			●	●	●	●	○	○			●			
	TPMR 160304	0.4			●	●			●	●	●			●	●	●	●	○	○			●			
	TPMR 160308	0.8	●		●	●	●		●	●	●			●	●	●	●	○	○			●			
Finishing	TPGR 090202R/L-F	0.2			●																				F61
	TPGR 090204R/L-F	0.4			●																				
	TPGR 090208R/L-F	0.8			●																				
Finishing-Medium -A: Finishing -B: Finishing-Medium -C: Medium cutting	TPGR 110302R/L-A	0.2		L	●	L		L																	E29 F61
	TPGR 110304R/L-A	0.4		L	●	L		L																●	
	TPGR 110304R/L-B	0.4		L	●			L																	
	TPGR 110308R/L-B	0.8			●																				
	TPGR 160302R/L-B	0.2	L	L	●	L	L	L																	
	TPGR 160304R/L-B	0.4	L	L	●	L	L	L																●	
	TPGR 160308R/L-B	0.8		L	●	L		L																●	
	TPGR 160304R/L-C	0.4	L	L	●		L	L																	
	TPGR 160308R/L-C	0.8		L	●			L																	

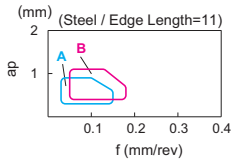
Applicable Chipbreaker Range

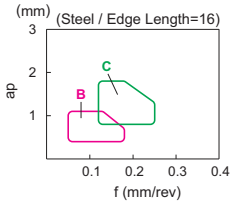












For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B77

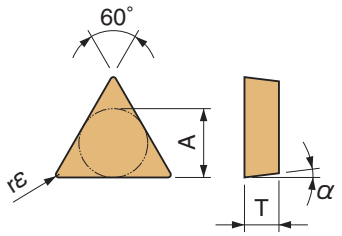
Inserts are sold in 10 piece boxes.

 ● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

60°Triangle • Positive without Hole

(mm)

Description	A	T	ød	α
TP_0902_	5.56	2.38	-	11°
TP_1103_	6.35	3.18	-	11°
TP_1603_	9.525	3.18	-	11°



P	Free-cutting steel	
	Carbon Steel and Alloy Steel	○
M	Stainless Steel	
K	Gray Cast Iron	● ✠
	Nodular Cast Iron	✠ ● ●
N	Non-ferrous Metals	
S	Heat-resistant alloy	
	Titanium Alloy	
H	Hard Materials	

Classification of usage
✠: Interruption / 1st Choice
✠: Interruption / 2nd Choice
●: Light Interruption / 1st Choice
○: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

Insert		Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125		Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Cast Iron	Without Chipbreaker	TPGN 090202	0.2			●																				●	F61	—
		TPGN 090204	0.4			●																				●		
		TPGN 090208	0.8			●																						
		TPGN 110302	0.2																							●	E29 F61	
		TPGN 110304	0.4			●	●																			●		
		TPGN 110308	0.8			●	●																			●		
		TPGN 160304	0.4			●	●																			●		
		TPGN 160308	0.8			●	●																			●		
		TPGN 160312	1.2																							●		
		TPMN 110304	0.4							●							●	●		○						●		
		TPMN 110308	0.8							●							●	●	○	○						●		
		TPMN 160304	0.4							●							●	●	○	○						●		
		TPMN 160308	0.8							●							●	●	○	○						●		
		TPMN 160312	1.2														●	●		○								

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B77

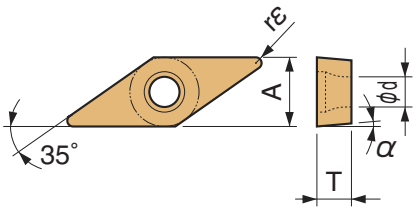
● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

35°Diamond • Positive with Hole

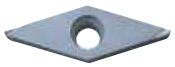
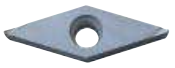
(mm)

Description	A	T	ød	α
VB_1103_	6.35	3.18	2.8	5°
VB_1604_	9.525	4.76	4.4	5°



P																							Free-cutting steel
	●	○			●	○	○	●	✖	✣								◔		◕				Carbon Steel and Alloy Steel
M											●	◕						◔		◕	◔			Stainless Steel
K							✣																✣	Gray Cast Iron
							◔																	Nodular Cast Iron
N																							◕	Non-ferrous Metals
S											○	◔									◔			Heat-resistant alloy
																							◕	Titanium Alloy
H																								Hard Materials

Classification of usage
✖: Interruption / 1st Choice
✣: Interruption / 2nd Choice
◕: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

	Insert (Handed Insert shows Left-hand)	Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Finishing		VBMT 110304GP	0.4	●	●	●		●	●		●	●									●		●				E23 ~E27 F37 F39 F63	(mm) (Steel / Edge Length=11) ap 3 2 1 HQ VF GP 0.1 0.2 0.3 0.4 f (mm/rev)
		VBMT 160404GP	0.4	●	●	●		●	●		●	●									●		●				E23 F37 F39 F63	
		160408GP	0.8	●	●	●		●	●		●	●									●		●					
		VBMT 110302VF	0.2	●	●			●	●	●	●	●									●		●				E23 ~E27 F37 F39 F63	
		110304VF	0.4	●	●			●	●	●	●	●	●								●		●					
		110308VF	0.8	●	●			●	●	●	●	●	●								●		●					
		VBMT 160402VF	0.2	●	●			●	●	●	●	●									●		●				E23 F37 F39 F63	
		160404VF	0.4	●	●			●	●	●	●	●	●								●		●					
		160408VF	0.8	●	●			●	●	●	●	●	●								●		●					
		160412VF	1.2	●	●			●	●	●	●	●	●								●		●					
Finishing-Medium		VBMT 110304HQ	0.4	●	●	●		●	●		●	●	●	●	●						●		●	●			E23 ~E27 F37 F39 F63	(mm) (Steel / Edge Length=16) ap 3 2 1 HQ VF GP 0.1 0.2 0.3 0.4 f (mm/rev)
		110308HQ	0.8	●	●	●		●	●		●	●	●	●	●						●		●	●				
		VBMT 160404HQ	0.4	●	●	●		●	●		●	●	●	●	●						●		●	●			E23 F37 F39 F63	
		160408HQ	0.8	●	●	●		●	●		●	●	●	●	●						●		●	●				
		160412HQ	1.2	●	●			●	●		●	●	●								●		●					
Medium	Sharp Edge	VBGT 110301FN-Z	0.1			●															●						E23 E25 E27 F37 F39 F63	—
		110302FN-Z	0.2			●															●							
		110304FN-Z	0.4			●															●							
		110308FN-Z	0.8																		●							
Finishing		VBGT 1103003R/L-F	0.03																		●				R		(mm) (Steel / Edge Length=11,16) ap 4 3 2 1 Y (16) Y (11) F / FSF 0.1 0.2 0.3 0.4 f (mm/rev)
		110301R/L-F	0.1			●															●				●			
		110302R/L-F	0.2	●	●	●			●												●				●			
		VBGT 1103005MR/L-F	< 0.05																			●	●					
		110301MR/L-F	< 0.1																			●	●					
		110302MR/L-F	< 0.2																			●	●					
	Super Fine 	VBET 1103003R/L-FSF	0.03			●															●							
		110301R/L-FSF	0.1			●															●							
		110302R/L-FSF	0.2			●															●							
		VBET 1103005MR/L-FSF	< 0.05																				●					
		110301MR/L-FSF	< 0.1																				●					
	Sharp Edge / Precision	110302MR/L-FSF	< 0.2																				●					

・Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05**, **<0.1**, **<0.2** etc.) indicate models with minus tolerance for corner R(rε).

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B77

Inserts are sold in 10 piece boxes.

 ● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

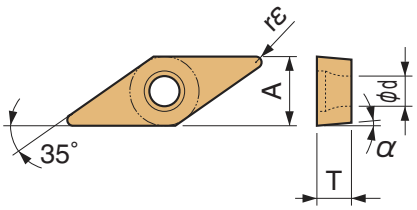
35°Diamond • Positive with Hole

(mm)

Description	A	T	ød	α
VC_0802_	4.76	2.38	2.3	7°
VC_1103_	6.35	3.18	2.8	7°

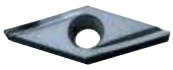
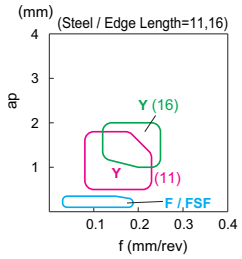
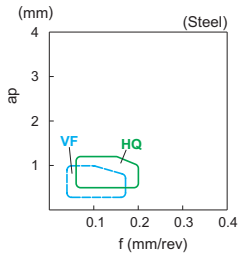
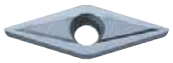
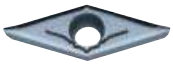
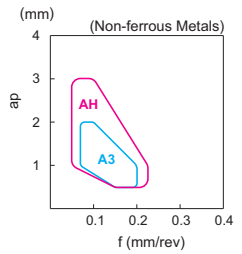
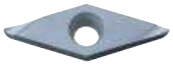
(mm)

Description	A	T	ød	α
VC_1604_	9.525	4.76	4.4	7°
VC_2205_	12.70	5.56	5.5	7°



P																							Free-cutting steel
	●	○			●	○	○	●	✖	✥								◔		◕			Carbon Steel and Alloy Steel
M											●	◕						◔		◕	◔		Stainless Steel
K							✥															✥	Gray Cast Iron
							◔																Nodular Cast Iron
N																						◕	Non-ferrous Metals
S											○	◔									◔		Heat-resistant alloy
																						◕	Titanium Alloy
H																							Hard Materials

Classification of usage
✖: Interruption / 1st Choice
✥: Interruption / 2nd Choice
◕: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

Insert (Handed Insert shows Left-hand)		Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Finishing-Medium		VBGT 1103003R/L-Y	0.03																		●				R	E23	
		VBGT 110301R/L-Y	0.1			●															●				●	E25	
		VBGT 110302R/L-Y	0.2	●	●	●			●												●				●	E27	
		VBGT 110304R/L-Y	0.4	●	●	●			●												●				●	F37	
		VBGT 110308R/L-Y	0.8			●															●				●	F39	
																										F63	
		VBGT 160402R/L-Y	0.2	●		●															●				●	E23	
		VBGT 160404R/L-Y	0.4	●	●	●			●												●				●	E25	
		VBGT 160408R/L-Y	0.8			●															●				●	E37	
																										F39	
																										F63	
		VBGT 1103005MR/L-Y	< 0.05																			●	●			E23	
		VBGT 110301MR/L-Y	< 0.1																			●	●			E25	
		VBGT 110302MR/L-Y	< 0.2																			●	●			E27	
		VBGT 110304MR/L-Y	< 0.4																			●	●			F37	
		VBGT 110308MR/L-Y	< 0.8																			●	●			F39	
																										F63	
		VBGT 160402MR/L-Y	< 0.2																			●	●			E23	
		VBGT 160404MR/L-Y	< 0.4																			●	●			E25	
		VBGT 160408MR/L-Y	< 0.8																			●	●			E37	
																										F39	
																										F63	
Finishing		VCMT 080202VF	0.2	●	●			●	●	●	●	●									●		●			E27	
		VCMT 080204VF	0.4	●	●			●	●	●	●	●	●								●		●			E37	
Finishing-Medium		VCMT 080202HQ	0.2	●	●	●		●	●		●	●									●		●			E39	
		VCMT 080204HQ	0.4	●	●	●		●	●		●	●	●	●	●						●		●	●		F63	
		VCMT 110304HQ	0.4			●					●	●									●					Refer to the table below	
		VCMT 160404HQ	0.4			●					●	●															
		VCMT 160408HQ	0.8			●						●															
	 Medium / Sharp Edge	VCGT 110301FN-Z	0.1			●																					—
		VCGT 110302FN-Z	0.2			●																					
		VCGT 110304FN-Z	0.4			●																					
Non-ferrous Metals	 Finishing-Medium / Sharp Edge	VCGT 160404AH	0.4																						●		
Non-ferrous Metals	 Finishing-Medium / Sharp Edge	VCGT 160404R/L-A3	0.4																						●		
		VCGT 160408R/L-A3	0.8																						●		
	Non-ferrous Material Medium-Roughing	VCGT 160412	1.2																						●		—
		VCGT 220530	3.0																						●	-	

・Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05**, **<0.1**, **<0.2** etc.) indicate models with minus tolerance for corner R(rε).

Description	Ref. Page for Toolholder
VC..11 type	**E23,E25,E27,F37,F39,F63**
VC..16 type	**E23,E25,F37,F39,F63**

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B77

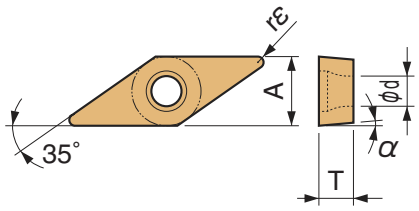
● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

35°Diamond • Positive with Hole

(mm)

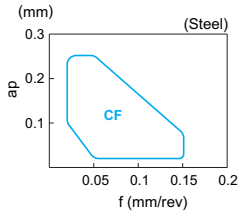
Description	A	T	ød	α
VB_0802_	4.76	2.38	2.3	11°
VB_1103_	6.35	3.18	2.8	11°

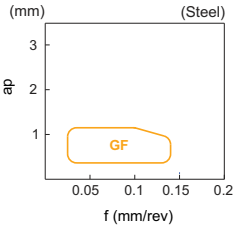


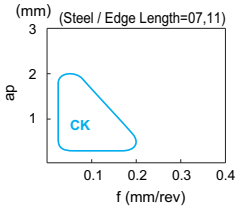
P																				●				Free-cutting steel
																			◔		●			Carbon Steel and Alloy Steel
M																			◔		●			Stainless Steel
K																								Gray Cast Iron
																								Nodular Cast Iron
N																								Non-ferrous Metals
S																								Heat-resistant alloy
																								Titanium Alloy
H																								Hard Materials

Classification of usage
✖: Interruption / 1st Choice
✖: Interruption / 2nd Choice
●: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

	Insert	Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Minute ap	Sharp Edge	VPGT 110302CF	0.2																		●						E25 E26
		VPGT 110301M-CF	< 0.1																			●	●				
		110302M-CF	< 0.2																			●	●				
	Sharp Edge / Polished Surface	VPGT 110301MP-CF	< 0.1																				●				
		110302MP-CF	< 0.2																				●				
Finishing	Sharp Edge	VPGT 110301MF-GF	< 0.1																				●				
		110302MF-GF	< 0.2																				●				
	Sharp Edge / Polished Surface	VPGT 110301MFP-GF	< 0.1																				●				
		110302MFP-GF	< 0.2																				●				
Finishing	With Honing	VPGT 080201CK	0.1																		●						E25 E26 F37 F63
		080202CK	0.2																		●						
		VPGT 110301CK	0.1																		●						E25 E26
		110302CK	0.2																		●						
		VPGT 080201M-CK	< 0.1																			●	●				E25 E26 F37 F63
		080202M-CK	< 0.2																			●	●				
		VPGT 110301M-CK	< 0.1																			●	●				E25 E26
		110302M-CK	< 0.2																			●	●				
Finishing	Sharp Edge / Polished Surface	VPGT 080201MP-CK	< 0.1																				●				E25 E26 F37 F63
		080202MP-CK	< 0.2																				●				
		VPGT 110301MP-CK	< 0.1																				●				E26
		110302MP-CK	< 0.2																				●				







・Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05**, **<0.1**, **<0.2** etc.) indicate models with minus tolerance for corner R(rε).

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B77

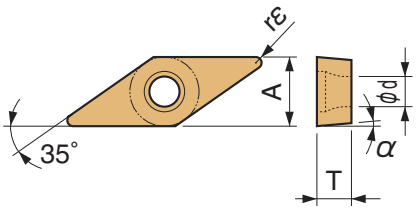
Inserts are sold in 10 piece boxes.

 ● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

35°Diamond • Positive with Hole

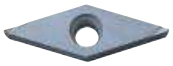
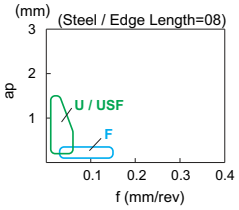
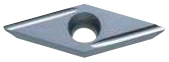
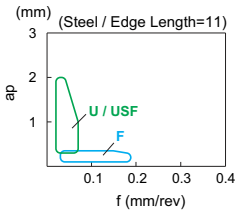
(mm)

Description	A	T	ød	α
VP_0802_	4.76	2.38	2.3	11°
VP_1103_	6.35	3.18	2.8	11°



P																			●				Free-cutting steel
																		◔		●			Carbon Steel and Alloy Steel
M																		◔		●			Stainless Steel
K																							Gray Cast Iron
																							Nodular Cast Iron
N																							Non-ferrous Metals
S																							Heat-resistant alloy
																							Titanium Alloy
H																							Hard Materials

Classification of usage
✖: Interruption / 1st Choice
✱: Interruption / 2nd Choice
●: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

	Insert Handed Insert shows Left-hand	Description	Dim. (mm) rε	Cermet TN6010	Cermet TN6020	Cermet TN60	PVD Cermet PV7005	PVD Cermet PV7010	PVD Cermet PV7020	CVD Coated Carbide CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	Carbide KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Finishing	Super Fine  Sharp Edge / Precision	VPET 080201R/L-FSF 080202R/L-FSF	0.1 0.2			● ●															● ●					E25 E26 F37 F63	
		VPET 1103003R/L-FSF 110301R/L-FSF 110302R/L-FSF	0.03 0.1 0.2			● ●															● ● ●					E25 E26	
		VPET 080201MR/L-FSF 080202MR/L-FSF	< 0.1 < 0.2																				● ●			E25 E26 F37 F63	
		VPET 1103005MR/L-FSF 110301MR/L-FSF 110302MR/L-FSF	< 0.05 < 0.1 < 0.2																				● ● ●			E25 E26	
Low Feed	Super Fine  Sharp Edge / Precision	VPET 080201FR/L-USF 080202FR/L-USF	0.1 0.2			● ●															● ●					E25 E26 F37 F63	
		VPET 1103003FR/L-USF 110301FR/L-USF 110302FR/L-USF	0.03 0.1 0.2			● ●															● ● ●					E25 E26	
		VPET 080201MFR/L-USF 080202MFR/L-USF	< 0.1 < 0.2																				● ●			E25 E26 F37 F63	
		VPET 1103005MFR/L-USF 110301MFR/L-USF 110302MFR/L-USF	< 0.05 < 0.1 < 0.2																				● ● ●			E25 E26	

・Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05**, **<0.1**, **<0.2** etc.) indicate models with minus tolerance for corner R(rε).

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B77

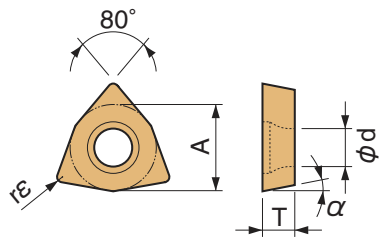
● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

80°Trigon • Positive with Hole

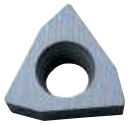
(mm)

Description	A	T	ød	α
WB_0601_	3.97	1.59	2.3	5°
WB_0802_	4.76	2.38	2.3	5°
WC_0201_	3.97	1.59	2.3	7°

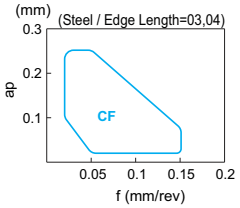


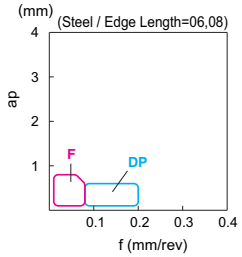
		TN6010	TN6020	TN60	PV7005	PV7010	PV7020	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PR930	PR1005	PR1025	PR1125	KW10
P	Free-cutting steel																			◓			
P	Carbon Steel and Alloy Steel	●	○			●	○		●	✖									◔		◓		
M	Stainless Steel																		◔		◓		
K	Gray Cast Iron																						✖
K	Nodular Cast Iron																						
N	Non-ferrous Metals																						◓
S	Heat-resistant alloy																						
S	Titanium Alloy																						◓
H	Hard Materials																						

Classification of usage
✖: Interruption / 1st Choice
✖: Interruption / 2nd Choice
◓: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

Insert (Handed Insert shows Left-hand)		Description	Dim. (mm) rε	TN6010	TN6020	TN60	PV7005	PV7010	PV7020	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PR930	PR1005	PR1025	PR1125	KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Minute ap	Sharp Edge	WBGT 060101M R/L-CF	< 0.1																			●	●				
		WBGT 060102M R/L-CF	< 0.2																			●	●				
Minute ap	Sharp Edge / Polished Surface	WBGT 060101MP R/L-CF	< 0.1																				●				
		WBGT 060102MP R/L-CF	< 0.2																				●				
Finishing		WBMT 060102 R/L-DP	0.2	L	L	●		L	L		L	L									●		●				
		WBMT 060104 R/L-DP	0.4	L	L	●		L	L		L	L									●		●				
		WBMT 080202 R/L-DP	0.2	L	L	●		L	L		●	●									●		●				
		WBMT 080204 R/L-DP	0.4	L	L	●		L	L		●	●									●		●				
Finishing		WBGT 0601003 R/L-F	0.03			L															●					L	
		WBGT 060101 R/L-F	0.1			●															●					●	
		WBGT 060102 R/L-F	0.2		L	●			L												●					●	
		WBGT 060104 R/L-F	0.4		●	●			●												●					●	
		WBGT 0802003 R/L-F	0.03																		●						
		WBGT 080201 R/L-F	0.1			●															●					●	
		WBGT 080202 R/L-F	0.2		L	●			L												●					●	
		WBGT 080204 R/L-F	0.4		●	●			●												●					●	
		WBGT 0601005M R/L-F	< 0.05																			●	●				
		WBGT 060101M R/L-F	< 0.1																			●	●				
		WBGT 060102M R/L-F	< 0.2																			●	●				
		WBGT 060104M R/L-F	< 0.4																			●	●				
		WBGT 0802005M R/L-F	< 0.05																			●	●				
		WBGT 080201M R/L-F	< 0.1																			●	●				
		WBGT 080202M R/L-F	< 0.2																			●	●				
		WBGT 080204M R/L-F	< 0.4																			●	●				
		WCGT 020101 R/L-F	0.1			L																				-	
		WCGT 020102 R/L-F	0.2			●															L						
		WCGT 020104 R/L-F	0.4			●															L						
Cast Iron	 Without Chipbreaker	WBGW 060102 R/L	0.2			L																			L	F41 F65	—
		WBGW 060104 R/L	0.4			L																					
		WBGW 080202 R/L	0.2			L																			L		
		WBGW 080204 R/L	0.4			L																					

F41 F65





・Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05**, **<0.1**, **<0.2** etc.) indicate models with minus tolerance for corner R(rε).

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B78

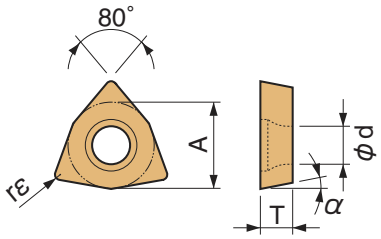
Inserts are sold in 10 piece boxes.

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

80°Trigon • Positive with Hole

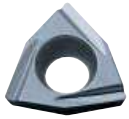
(mm)

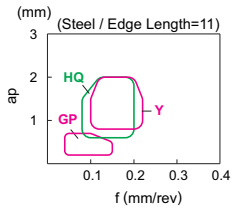
Description	A	T	ød	α
WP_1102_	6.35	2.38	2.8	11°
WP_1603_	9.525	3.18	4.4	11°

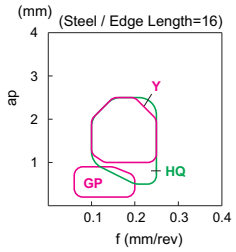


		TN6010	TN6020	TN60	PV7005	PV7010	PV7020	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PR930	PR1005	PR1025	PR1125	KW10
P	Free-cutting steel																			◓			
P	Carbon Steel and Alloy Steel	●	○			●	○		●	✖	✥								◔		◓		
M	Stainless Steel											●	◓						◔		◓	◔	
K	Gray Cast Iron																						✥
K	Nodular Cast Iron																						
N	Non-ferrous Metals																						◓
S	Heat-resistant alloy											○	◔								◔		
S	Titanium Alloy																						◓
H	Hard Materials																						

Classification of usage
✖: Interruption / 1st Choice
✥: Interruption / 2nd Choice
◓: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

	Insert (Handed Insert shows Left-hand)	Description	Dim. (mm) rε	TN6010	TN6020	TN60	PV7005	PV7010	PV7020	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA4010	CA4115	CA4120	CA4505	CA4515	PR930	PR1005	PR1025	PR1125	KW10	Ref. Page for Toolholder	Applicable Chipbreaker Range
Finishing		WPMT 110204GP	0.4			●					●	●									●		●				F41 F65	(Steel / Edge Length=11)
Finishing		WPMT 160304GP	0.4			●					●	●									●		●					
Finishing-Medium		WPMT 110202HQ	0.2			●					●	●									●		●					
		110204HQ	0.4	●	●	●		●	●		●	●	●	●	●						●		●	●				
		WPMT 160304HQ	0.4	●	●	●		●	●		●	●	●	●	●						●		●	●				
		160308HQ	0.8	●	●	●		●	●		●	●	●	●	●						●		●	●				
Finishing-Medium		WPGT 110202R/L-Y	0.2			●															●					●		
		110204R/L-Y	0.4		L	●															●					●		
		WPGT 160304R/L-Y	0.4		L	●															●					●		
		160308R/L-Y	0.8			●															●					●		
		WPGT 110202MR/L-Y	< 0.2																			●	●					
		110204MR/L-Y	< 0.4																			●	●					
		WPGT 160304MR/L-Y	< 0.4																			●	●					
		160308MR/L-Y	< 0.8																			●	●					
Cast Iron	Without Chipbreaker	WPGW 110202	0.2																							●		—
		110204	0.4																							●		
		WPGW 160304	0.4																							●		
		160308	0.8																							●		





・Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05**, **<0.1**, **<0.2** etc.) indicate models with minus tolerance for corner R(rε).

For grades (TN30 PV60 PR905 / PV30 PV90 PR915), See Page B78

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

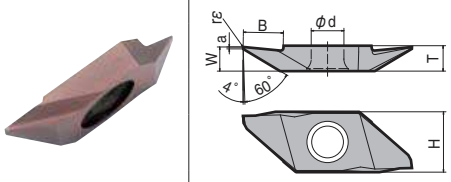
Inserts are sold in 10 piece boxes.

Inserts for Back Turning (Small Tools)

Classification of usage
✖: Interruption / 1st Choice
✖: Interruption / 2nd Choice
◕: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

				Ref. Page for Toolholder
P	Free-cutting steel			
	Carbon Steel / Alloy Steel	◕		
M	Stainless Steel	◕		
K	Gray Cast Iron		◕	
	Nodular Cast Iron		◔	
N	Non-ferrous Metals		◕	
S	Heat-resistant alloy			
	Titanium Alloy		◕	
H	Hard Materials			

For KTKF type toolholder

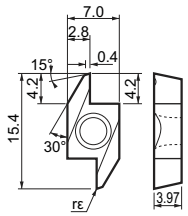
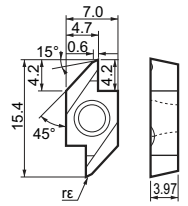
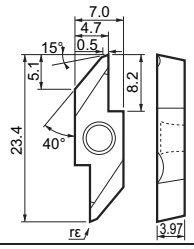
Insert (Handed insert shows Right-hand)	Description		Dimension (mm) W	a	B	R(rε)	T	H	ød	PVD Coated Carbide PR1025	Carbide KW10	Ref. Page for Toolholder
	TKFB	12R15005M	1.5	0.25	2.6	<0.05	3.0	8.7	5.2	●	●	E6
		12R28005M	2.8	0.3	4.6	<0.05				●	●	
		12R28010M				<0.1				●	●	
	TKFB	16R38005M	3.8	0.3	6.3	<0.05	4.0	9.5	5.2	●	●	
		16R38010M				<0.1				●	●	

• Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05**, **<0.1**, **<0.2** etc.) indicate models with minus tolerance for corner R(rε).

For AABS / SABS / AABW / SABW toolholder

Classification of usage
✖: Interruption / 1st Choice
✖: Interruption / 2nd Choice
◕: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice
(In case hardness is under 45HRC)

									Ref. Page for Toolholder
P	Free-cutting Steel								
	Carbon Steel / Alloy Steel			◔		◕			
M	Stainless Steel			◔		◕			
K	Gray Cast Iron							◕	
	Nodular Cast Iron							◔	
N	Non-ferrous Metals							◕	
S	Heat-Resistant Alloy						◔		
	Titanium Alloy							◕	
H	Hard Materials								

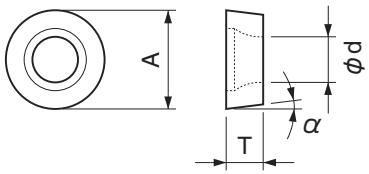
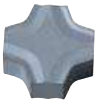
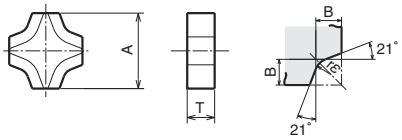
Insert (Handed insert shows Right-hand)	Description		Dim. (mm) rε	Cermet TC60		PVD Coated Carbide PR930	PR1005	PR1025	Carbide KW10	Ref. Page for Toolholder
	ABS	15R/L4005	0.05	R		R			R	E8
		15R/L4015	0.15	R		R			R	
	ABS	15R/L4005M	<0.05				R	R		
		15R/L4015M	<0.15				R	R		
	ABW	15R/L4005	0.05	R		R			R	E9
		15R/L4015	0.15	R		R			R	
	ABW	15R/L4005M	<0.05				R	R		
		15R/L4015M	<0.15				R	R		
	ABW	23R/L5005	0.05	R		R			R	E10
		23R/L5015	0.15	R		R			R	
	ABW	23R/L5005M	<0.05				R	R		
		23R/L5015M	<0.15				R	R		

• Insert whose corner R(rε) dimension expressed with less than sign (e.g. **<0.05**, **<0.1**, **<0.2** etc.) indicate models with minus tolerance for corner R(rε).

Inserts are sold in 10 piece boxes.

 ● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

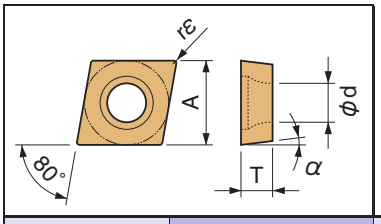
Bearing Machining

Insert		Description	Dimension (mm) A	T	ød	rε	Angle (°) α	Cermet TN90	Ref. Page for Toolholder
External / Internal / Facing		**RCMT 1204M0-BB**	12.0	4.76	4.2	-	7°	●	**D37**
		1606M0-BB	16.0	6.35	5.5			●	
		RPMT 1203M0-BB	12.0	3.18	4.4	-	11°	●	**F71**
		1604M0-BB	16.0	4.76	5.5			●	
 Round Chamfering					B	rε			
		SNMF 120406-21	12.70	4.76	1.5	0.6	-	●	**D38 F71**
		120410-21			3.0	1.0		●	
		120416-21			3.1	1.6		●	
		120421-21			3.2	2.1		●	
		120426-21			3.3	2.6		●	

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

80°Diamond • Positive with Hole

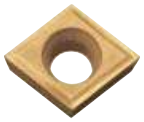
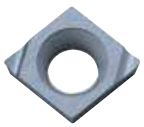
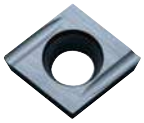
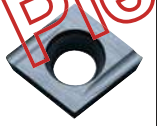


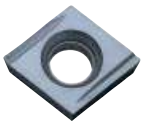
(mm)

Description	A	T	ød	α
CC_0301_	3.5	1.4	1.9	7°
CC_0401_	4.3	1.8	2.3	
CC_0602_	6.35	2.38	2.8	
CC_09T3_	9.525	3.97	4.4	
CC_1204_	12.7	4.76	5.5	

(mm)

Description	A	T	ød	α
CPMT0802_	7.94	2.38	3.3	11°
CP_0802_	7.94	2.38	3.5	
CP_0903_	9.525	3.18	4.5	

Insert (Handed Insert shows Left-hand)	Description	Dim. (mm) rε	Cermet TN30	Cermet PV30	PVD Cermet PV60	PVD Cermet PV90	PVD Coated Carbide PR915	PVD Coated Carbide PR905	Ref. Page for Toolholder
Finishing-Medium	CCMT 060202HQ	0.2			●	●			E11~13
	CCMT 060204HQ	0.4	●	●	●	●			F49~50
	CCMT 09T302HQ	0.2	●		●	●			E11~13
	CCMT 09T304HQ	0.4	●	●	●	●			F24
	CCMT 09T308HQ	0.8	●	●	●	●			F44
Finishing-Medium	CCMT 060202GK	0.2					●		E11~13
	CCMT 060204GK	0.4					●		F49~50
	CCMT 09T302GK	0.2					●		E11~13
	CCMT 09T304GK	0.4					●		F24
									F44
	CCMT 120404GK	0.4					●		E12
	CCMT 120408GK	0.8					●		
	CCMT 120412GK	1.2					●		
 Medium	CCGT 060201	0.1	●		●	●			E11~13
	CCGT 060202	0.2	●		●	●			F49
	CCGT 060204	0.4	●		●	●			F50
	CCGT 09T301	0.1			●	●			E11~13
	CCGT 09T302	0.2	●		●	●			F24
	CCGT 09T304	0.4	●		●	●			F44
	CCMT 09T308	0.8			●	●			
 Finishing	CCGT 030102R/L-F	0.2			L	L			F24
	CCGT 030104R/L-F	0.4			L	L			F49
	CCGT 040102R/L-F	0.2			L	L			
	CCGT 040104R/L-F	0.4			L	L			
 Low Feed / Sharp Edge	CCGT 060201FR/L-U	0.2	R	●	●				E11~13
	CCGT 060202FR/L-U	0.4	R	●	●	L			F49~50
	CCGT 09T301FR/L-U	0.1	R	R					E11~13
	CCGT 09T302FR/L-U	0.2	R	R					F24
									F44
 Low Feed / With Honing	CCGT 060202ER/L-U	0.2	●	●	●	L			E11~13
	CCGT 060204ER/L-U	0.4			●	L			F49~50
	CCGT 09T301ER/L-U	0.1	R	●					E11-13
	CCGT 09T302ER/L-U	0.2	R	●					F24
	CCGT 09T304ER/L-U	0.4	●	●					F44

Insert (Handed Insert shows Left-hand)	Description	Dim. (mm) rε	Cermet TN30	Cermet PV30	PVD Cermet PV60	PVD Cermet PV90	PVD Coated Carbide PR915	PVD Coated Carbide PR905	Ref. Page for Toolholder
Finishing	CPMT 080204GP	0.4			●	●			F26
									F49
									F50
	CPMT 090304GP	0.4			●	●			F24
	090308GP	0.8			●	●			F26
									F49
									F50
Finishing-Medium	CPMH 080204HQ	0.4			●	●			F26
	080208HQ	0.8			●	●			F49
									F50
	CPMH 090304HQ	0.4	●	●	●	●			F24
	090308HQ	0.8		●	●	●			F26
									F49
									F50
Medium cutting	CPMH 080204	0.4			●	●			F26
	080208	0.8			●	●			F49
									F50
	CPMH 090304	0.4	●	●	●	●			F24
	090308	0.8	●	●	●	●			F26
									F49
									F50
Low Carbon Steel Finishing	CPMT 080204XP	0.4			●	●			F26
									F49
									F50
	CPMT 090304XP	0.4			●	●			F24
	090308XP	0.8			●	●			F26
									F49
									F50
Low Carbon Steel Finishing-Medium	CPMT 090304XQ	0.4			●	●			F24
	090308XQ	0.8			●	●			F26
									F49
									F50
 Finishing-Medium	CPMH 080204R/L-Y	0.4				●			F26
	080208R/L-Y	0.8				●			F49
									F50
	CPMH 090304R/L-Y	0.4				●			F24
	090308R/L-Y	0.8				●			F26
									F49
									F50

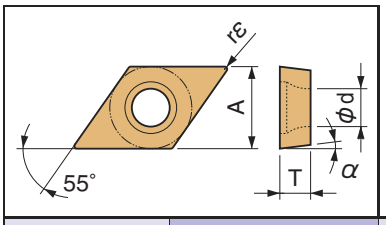
Please refer to pages B45 - B71

For other grade, See Page B45~B71

Inserts are sold in 10 piece boxes.

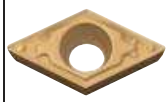
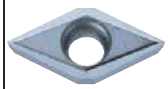
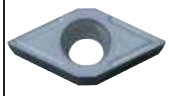
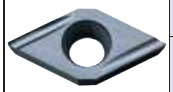
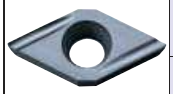
● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

55°Diamond • Positive with Hole



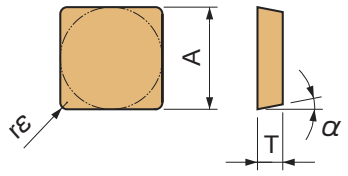
(mm)

Description	A	T	ød	α
DC_0702_	6.35	2.38	2.8	7°
DC_11T3_	9.525	3.97	4.4	

Insert (Handed Insert shows Left-hand)	Description	Dim. (mm) rε	Cermet TN30	PVD Cermet PV30	PVD Cermet PV60	PVD Cermet PV90	PVD Coated Carbide PR915	PVD Coated Carbide PR905	Ref. Page for Toolholder
Minute ap	DCGT 070202CF	0.2					●		Refer to the table below
	DCGT 11T302CF	0.2					●		
Finishing	DCMT 070202GP	0.2			●	●			
	070204GP	0.4			●	●			
	DCMT 11T304GP	0.4			●	●			
	11T308GP	0.8			●	●			
 Finishing-Medium	DCMT 070202HQ	0.2			●	●			
	070204HQ	0.4	●		●	●			
	070208HQ	0.8			●	●			
	DCMT 11T302HQ	0.2	●		●	●			
	11T304HQ	0.4	●	●	●	●			
	11T308HQ	0.8	●	●	●	●			
 Medium / With Honing	DCGT 11T302EN-Z	0.2				●			
	11T304EN-Z	0.4				●			
 Medium cutting	DCGT 070201	0.1	●	●	●	●			
	070202	0.2	●	●	●	●			
	070204	0.4	●	●	●	●			
	DCGT 11T301	0.1	●	●	●	●			
	11T302	0.2	●	●	●	●			
	11T304	0.4	●	●	●	●			
	DCMT 11T308	0.8	●	●	●	●			
Low Carbon Steel / Finishing	DCMT 070204XP	0.4			●	●			
	DCMT 11T302XP	0.2			●	●			
	11T304XP	0.4			●	●			
	11T308XP	0.8			●	●			
Low Carbon Steel / Finishing-Medium	DCMT 11T304XQ	0.4			●	●			
	11T308XQ	0.8			●	●			
 Low Feed / Sharp Edge	DCGT 070202F R/L-U	0.2	●	R		●	●	●	
	DCGT 11T301F R/L-U	0.1		R					
	11T302F R/L-U	0.2	R	R		●	●	●	
 Low Feed / With Honing	DCGT 070202E R/L-U	0.2	R	R		●			
	070204E R/L-U	0.4	R			●			
	DCGT 11T302E R/L-U	0.2	R			●			
	11T304E R/L-U	0.4	●	●		●			

Description	Ref. Page for Toolholder
DC..07 type	E14~17,E19~21,F29,F51~52
DC..11 type	E14~17,E19~21,F29,F44,F51~52

90°Square • Positive without Hole



(mm)

Description	A	T	ød
SP_0903_	9.525	3.18	11°
SP_1203_	12.7	3.18	11°
SP_1204_	12.7	4.76	11°

Insert	Description	Dim. (mm) rε	Cermet TN30	PVD Cermet PV30	PVD Cermet PV60	PVD Cermet PV90	PVD Coated Carbide PR915	PVD Coated Carbide PR905	Ref. Page for Toolholder
Medium cutting	SPMR 090304G	0.4				●			E28 F60
	090308G	0.8				●			
	SPMR 120304G	0.4				●			
	120308G	0.8				●			
Without Chipbreaker	SPMN 090308	0.8		●					E28 F60
	SPMN 120308	0.8		●					
	SPMN 120408	0.8						●	-
	120412	1.2						●	

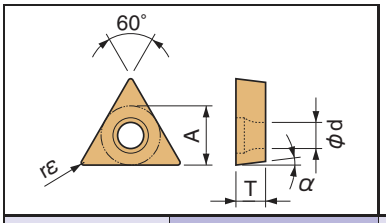
Please refer to pages B45 - B71

For other grade, See Page B45~B71

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

60°Triangle • Positive with Hole



(mm)

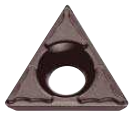
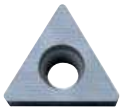
Description	A	T	ød	α
TB_0601_	3.97	1.59	2.3	5°
TC_0902_	5.56	2.38	2.5	7°
TC_1102_	6.35	2.38	2.8	
TC_16T3_	9.525	3.97	4.4	

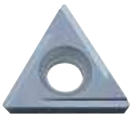
(mm)

Description	A	T	ød	α
TPMT0902_	5.56	2.38	2.8	11°
TPMT1603_	9.525	3.18	4.4	

(mm)

Description	A	T	ød	α
TP_0802_	4.76	2.38	2.3	11°
TP_0902_	5.56	2.38	3.0	
TP_1102_	6.35	2.38	3.5	
TP_1103_	6.35	3.18	3.3	
TP_1603_	9.525	3.18	4.5	

Insert (Handed Insert shows Left-hand)	Description	Dim. (mm) rε	Cermet TN30	PVD Cermet PV30	PVD Cermet PV60	PVD Cermet PV90	PVD Coated Carbide PR915	PVD Coated Carbide PR905	Ref. Page for Toolholder
 Minute ap	TBGT 060102CF	0.2					●		F33 F48 F55
Finishing	TBGT 060102R/L	0.2	●		●	L	●	●	
	060104R/L	0.4	L		●	L			
 Without Chipbreaker	TBGW 060102	0.2			●				
Finishing-Medium	TCMT 16T304HQ	0.4				●			
	16T308HQ	0.8				●			
Low Feed / Sharp Edge	TCGT 080202FR/L-U	0.2	R	R					E22
	TCGT 110301FR/L-U	0.1	R	R					E22 F34
	110302FR/L-U	0.2	R	R					
Low Feed / With Honing	TCGT 080202ER/L-U	0.2	R						E22
	TCGT 110304ER/L-U	0.4	R						E22 F34
Minute ap	TPGT 080202CF	0.2					●		E22 F55 F58
	TPGT 090202CF	0.2					●		F33 F55 F58
Finishing	TPMT 090202GP	0.2				●			F33 F55 F58
	090204GP	0.4			●	●			
	TPMT 110304GP	0.4			●	●			E22 F33 F55 F58
	110308GP	0.8			●	●			
	TPMT 160304GP	0.4			●	●			F33 F55 F58
Finishing-Medium	TPMT 090202HQ	0.2			●	●			
	090204HQ	0.4	●		●	●			
	TPMT 110302HQ	0.2	●		●				E22 F33 F55 F58
	110304HQ	0.4	●		●	●			
	110308HQ	0.8	●		●	●			
	TPMT 160304HQ	0.4			●	●			F33 F55 F58
	160308HQ	0.8			●	●			

Insert (Handed Insert shows Left-hand)	Description	Dim. (mm) rε	Cermet TN30	PVD Cermet PV30	PVD Cermet PV60	PVD Cermet PV90	PVD Coated Carbide PR915	PVD Coated Carbide PR905	Ref. Page for Toolholder
Low Carbon Steel / Finishing	TPMT 090204XP	0.4			●	●			E22 F55 F58
	TPMT 110304XP	0.4			●	●			E22 F33 F55 F58
	110308XP	0.8			●	●			
	TPMT 160304XP	0.4			●	●			F33 F55 F58
	160308XP	0.8			●	●			
Low Carbon Steel / Finishing-Medium	TPMT 110304XQ	0.4			●	●			E22 F33 F55 F58
	110308XQ	0.8			●	●			
	TPMT 160304XQ	0.4			●	●			F33 F55 F58
	160308XQ	0.8			●	●			
Finishing	TPGH 080202R/L	0.2	●	●	L	L	●	●	E22 F55 F58
	080204R/L	0.4	L	L	●	L			
	TPGH 090202R/L	0.2	●	●	L	L	●	●	F33 F55 F58
	090204R/L	0.4	L	L	●	L			
	TPGH 110202R/L	0.2			L	L			F57
	110204R/L	0.4			L	L			
	TPGH 110302R/L	0.2	R	●	L	L			E22 F33 F55 F58
	110304R/L	0.4	●	●	●	L			
	110308R/L	0.8			L	L			
	TPGH 160302R/L	0.2			L	L			F33 F55 F58
	160304R/L	0.4	●	L	●	L			
	160308R/L	0.8	●		L	L			
 Medium	TPGH 110302R/L-H	0.2	L		L	L			E22 F33 F55 F58
	110304R/L-H	0.4	●		●	L			
	110308R/L-H	0.8			L	L			
	TPGH 160304R/L-H	0.4			L	L			F33 F55 F58
	160308R/L-H	0.8			L	L			
Without Chipbreaker	TPGB 080202	0.2	●						E22 F55 F58
	080204	0.4	●		●				
	TPGB 090202	0.2	●						F33 F55 F58
	090204	0.4	●		●				
	TPGB 110202	0.2	●						F57
	TPGB 110301	0.1			●				E22 F33 F55 F58
	110302	0.2	●		●				
	110304	0.4	●		●				
	110308	0.8	●						
	TPGB 160304	0.4	●						F33 F55 F58

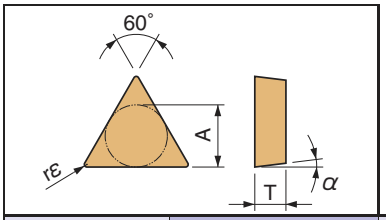
Please refer to pages B45 - B71

For other grade, See Page B45~B71

 ● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

60°Triangle • Positive without Hole

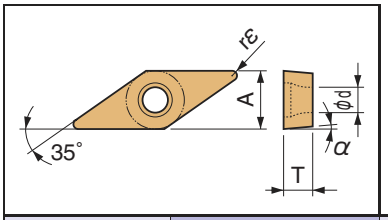


(mm)

Description	A	T	α
TP_0902_	5.56	2.38	11°
TP_1103_	6.35	3.18	
TP_1603_	9.525	3.18	

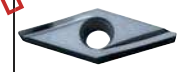
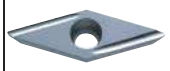
Insert (Handed Insert shows Left-hand)	Description	Dim. (mm) rε	Cermet TN30	PVD Cermet PV30	PVD Cermet PV60	PVD Cermet PV90	PVD Coated Carbide PR915	PVD Coated Carbide PR905	Ref. Page for Toolholder
Finishing	TPMR 110304DP	0.4	●						E69 F61
	TPMR 160304DP	0.4	●						
Finishing	TPMR 110304GP	0.4				●			
	TPMR 160304GP	0.4				●			
Finishing-Medium	TPMR 110304HQ 110308HQ	0.4 0.8	●			● ●			
	TPMR 160304HQ 160308HQ	0.4 0.8				● ●			
Medium cutting	TPMR 110304G 110308G	0.4 0.8				● ●			E69 F61
	TPMR 160304G 160308G	0.4 0.8				● ●			
Medium cutting	TPMR 110304	0.4	●						
	TPMR 160304 160308	0.4 0.8	● ●	● ●					
-A: Finishing -B: Finishing-Medium -C: Medium cutting	TPGR 110302R/L-A 110304R/L-A	0.2 0.4	L ●		L ●	L L			
	TPGR 110304R/L-B 110308R/L-B	0.4 0.8	● R		● L	L L			
	TPGR 160302R/L-B 160304R/L-B 160308R/L-B	0.2 0.4 0.8	L ● L		L ● L	L L L			
	TPGR 160304R/L-C 160308R/L-C	0.4 0.8	L L		● L	L L			
Without Chipbreaker	TPGN 090204	0.4	●						F61
	TPGN 160308	0.8	●						E69 F61
	TPMN 160308	0.8		●					

35°Diamond • Positive with Hole



(mm)

Description	A	T	ød	α
VB_1103_	6.35	3.18	2.8	5°
VB_1604_	9.525	4.76	4.4	
VC_0802_	4.76	2.38	2.3	7°
VP_1103_	6.35	3.18	2.8	11°

Insert (Handed Insert shows Left-hand)	Description	Dim. (mm) rε	Cermet TN30	PVD Cermet PV30	PVD Cermet PV60	PVD Cermet PV90	PVD Coated Carbide PR915	PVD Coated Carbide PR905	Ref. Page for Toolholder
Finishing	VBMT 110304GP	0.4			●	●			E23 ~E27 F37 F39 F63
	VBMT 160404GP 160408GP	0.4 0.8	● ●	● ●	● ●	● ●			E23 F37 F39 F63
Finishing	VBMT 110302VF 110304VF 110308VF	0.2 0.4 0.8				● ● ●			E23 ~E27 F37 F39 F63
	VBMT 160402VF 160404VF 160408VF 160412VF	0.2 0.4 0.8 1.2				● ● ● ●			E23 F37 F39 F63
Finishing-Medium	VBMT 110304HQ 110308HQ	0.4 0.8	● ●	● ●	● ●	● ●			E23 ~E27 F37 F39 F63
	VBMT 160404HQ 160408HQ 160412HQ	0.4 0.8 1.2	● ● 	● ● 	● ● 	● ● ●			E23 F37 F39 F63
Finishing	VBGT 110302R/L-F	0.2			●				E23 E25 E27 F37 F39 F63
 Finishing-Medium	VBGT 110302R/L-Y 110304R/L-Y	0.2 0.4			● ●				
	VBGT 160402R/L-Y 160404R/L-Y	0.2 0.4			● ●				E23 E25 E37 F39 F63
Finishing	VCMT 080202VF 080204VF	0.2 0.4				● ●			E27 F37 F39 F63
Finishing-Medium	VCMT 080202HQ 080204HQ	0.2 0.4			● ●	● ●			
	VCMT 160404HQ 160408HQ	0.2 0.4				● ●			
Minute ap	VPGT 110302CF	0.2					●		E25 E26
 Low Feed / Sharp Edge	VPGT 110302FR/L-U	0.2					●	●	

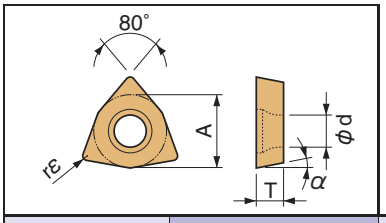
Please refer to pages B45~B71

For other grade, See Page B45~B71

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

80°Trigon • Positive with Hole

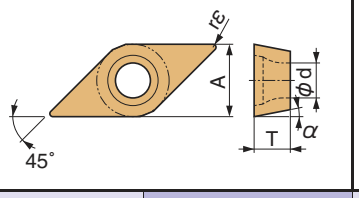


(mm)

Description	A	T	ød	α
WB__0601_	3.97	1.59	2.3	5°
WB__0802_	4.76	2.38	2.3	
WP__1102_	6.35	2.38	2.8	11°
WP__1603_	9.525	3.18	4.4	

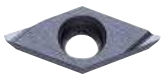
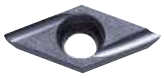
Insert (Handed Insert shows Left-hand)	Description	Dim. (mm) rε	Cermet TN30	Cermet PV30	PVD Cermet PV60	PVD Cermet PV90	PVD Coated Carbide PR915	PVD Coated Carbide PR905	Ref. Page for Toolholder
Finishing	WBMT 060102R/L-DP	0.2			L				F41 F65
	WBMT 060104R/L-DP	0.4			L				
	WBMT 080202R/L-DP	0.2			L				
	WBMT 080204R/L-DP	0.4			L				
Finishing	WBGT 060102R/L-F	0.2	●	●	L	L			
	WBGT 060104R/L-F	0.4	●	●	L	L			
	WBGT 080202R/L-F	0.2	●	●	L	L			
	WBGT 080204R/L-F	0.4	●	●	L	L			
Finishing	WPMT 110204GP	0.4			●	●			
	WPMT 160304GP	0.4			●	●			
Finishing-Medium	WPMT 110202HQ	0.2			●	●			
	WPMT 110204HQ	0.4			●	●			
	WPMT 160304HQ	0.4			●	●			
	WPMT 160308HQ	0.8			●	●			
Finishing-Medium	WPGT 110202R/L-Y	0.2			L	L			
	WPGT 110204R/L-Y	0.4			L	L			
	WPGT 160304R/L-Y	0.4			L	L			
	WPGT 160308R/L-Y	0.8				L			

45°Diamond • Positive with Hole



(mm)

Description	A	T	ød	α
YP_0602_	4.76	2.38	2.3	11°

Insert (Handed Insert shows Left-hand)	Description	Dim. (mm) rε	Cermet TN30	Cermet PV30	PVD Cermet PV60	PVD Cermet PV90	PVD Coated Carbide PR915	PVD Coated Carbide PR905	Ref. Page for Toolholder
 Finishing	YPGT 060202R/L-F	0.2					●	●	F27 F59
 Low Feed / Sharp Edge	YPGT 060202FR/L-U	0.2					●	●	

Please refer to pages B45 - B71

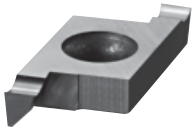
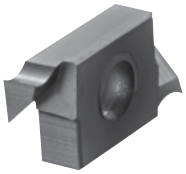
For other grade, See Page B45~B71

Inserts are sold in 10 piece boxes.

 ● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Micro Boring

● Twin Bar

Micro Boring	Micro Face Grooving
TWB Twin Bar ➡ **F8**	TWFG Twin Bar ➡ **G54**
	
TWBT Twin Bar ➡ **F8**	TWFGT Twin Bar ➡ **G54**
	

● System Tip-Bar, Tip-Bar & 2 Edges Tip-Bar

Micro Boring		Micro Back Boring
VNB-S / VNB System Tip-Bar ➡ **F10**	VNBX-S System Tip-Bar ➡ **F16**	VNBT System Tip-Bar ➡ **F10**
HPB 2 Edges Tip-Bar ➡ **F18**	-	HPBT 2 Edges Tip-Bar ➡ **F18**
	-	
PSB-S Tip-Bar ➡ **F20**	-	PSBT-S tip bar ➡ **F20**
	-	

Solid Tip-Bar [Grooving / Threading]

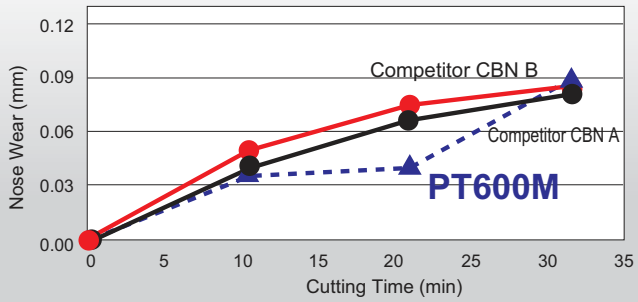
Micro Internal Grooving	Micro Face Grooving	Micro Internal Threading
VNG System Tip-Bar ➡ **G33**	VNFG System Tip-Bar ➡ **G56**	VNT System Tip-Bar ➡ **J27**
HPG 2 Edges Tip-Bar ➡ **G30**	HPFG 2 Edges Tip-Bar ➡ **G53**	HPT 2 Edges Tip-Bar ➡ **J24**
PSG Tip-Bar ➡ **G32**	PSFG Tip-Bar ➡ **G57**	PST Tip-Bar ➡ **J26**

"PT600M" for Hard Materials / Gray Cast Iron

MEGACOAT

With the use of MEGACOAT, it achieves a significantly longer tool life approaching that of CBN.

Wear comparison (for machining of hard materials)



Cutting Condition:
Vc=100m/min, ap=0.2mm, f=0.1mm/rev, Wet
Workpiece Material: SCM415H (Hardened)
58~62HRC

The wear resistance of PT600M is similar to that of competitor's CBN A and B for low speed machining of hard materials (Vc=100m/min)

Cell Fiber Ceramic "CF1" for Heat-resistant Alloy

Prolonged tool life and acceleration of cutting of heat resistant alloy such as inconel

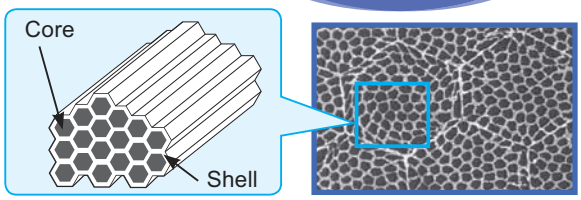
What is Cell Fiber?

Composite material consisting of high structure control composite core (gray part) and fibriform organization of shell (white part)

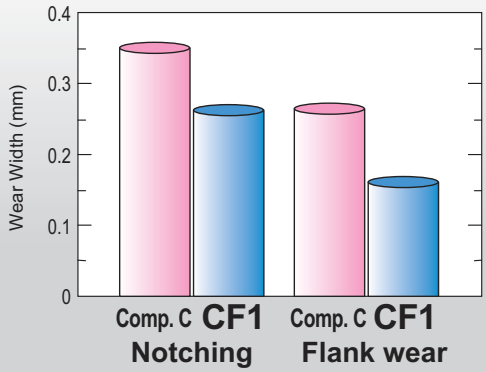
Features

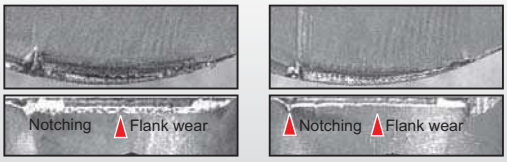
Consisting of polycrystaline ceramics material

- Superior heat and oxidation resistance
- Hardened / Superior wear resistance
- Superior fracture resistance by crack progress supression



Comparison of Wear Resistance





Competitor C **CF1**

<Cutting Condition>
Workpiece: Inconel 718,
Tool geometry; RNGN120400
Vc =150m/min, ap =1mm
f =0.15mm/rev Wet Cutting

Ceramic Inserts Identification System

- Identification System

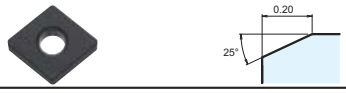
C	N	G	A	12	04	04	S01525

Turning Indexable Inserts Identification System See page **B2**

Edge Preparation (See Table.1)

- How to identify edge preparation

Table-1

Edge Preparation				
Symbol	Cutting Edge Spec.	Example		Shape
S	Chamfered + Honed Cutting Edge	S01525	0.15mm X 25° Chamfered + Honed Cutting Edge	
T	Chamfered Cutting Edge	T02025	0.20mm X 25° Chamfered Cutting Edge	

- See Page **B3** for insert color.

80°Diamond • Negative

(mm)

Description	A	T	ød
CN_A1204_	12.70	4.76	5.16
CNGA1606_	15.875	6.35	6.35
CN_N1204_	12.70	4.76	-

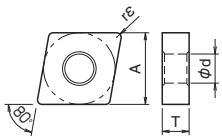
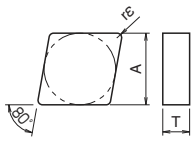
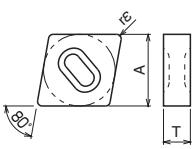
(mm)

Description	A	T	ød
CN_N 1207_	12.70	7.94	-
CNGN 1607_	15.875	7.94	-
CNGX 1207_	12.70	7.94	-

Edge Specification			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered + Honed Cutting Edge	S01225	0.12mm X 25° Chamfered + Honed Cutting Edge
T	Chamfered Cutting Edge	T01215	0.12mm X 15° Chamfered Cutting Edge

Classification of usage
- ✖: Interruption / 1st Choice
- ✖: Interruption / 2nd Choice
- ◕: Light Interruption / 1st Choice
- ◔: Light Interruption / 2nd Choice
- ●: Continuous / 1st Choice
- ○: Continuous / 2nd Choice

		KA30	A65		A66N	PT600M	KS6000		CF1	
K	Gray Cast Iron (With Scale)					◕	✖			
K	Gray Cast Iron (Without Scale)	●		◔		◕				
S	Heat-resistant alloy								◕	
H	Hard Materials				○	●			◔	

Insert	Description	(Previous Description)	Edge Preparation	Dim. (mm) rε	KA30	A65		A66N	PT600M	KS6000		CF1		Ref. Page for Toolholder
	CNGA 120412S01025	CNGA 120412	S01025	1.2	●									D8 F42 F66
	CNGA 120404S01525	CNGA 120404	S01525	0.4				●						
	120408S01525	120408		0.8				●						
	120412S01525	120412		1.2				●						
	CNGA 120404S02025	-	S02025	0.4					●					
	120408S02025	-		0.8					●					
	120412S02025	-		1.2					●					
	CNGA 120404S03030	CNGA 120404-T30	S03030	0.4				●						
	120408S03030	120408-T30		0.8				●						
	120412S03030	120412-T30		1.2				●						
	CNGA 120412T00520	CNGA 120412-T05	T00520	1.2	●									
	CNGA 120404T01525	CNGA 120404T01525	T01525	0.4				●						
	120408T01525	120408T01525		0.8				●						
	120412T01525	120412T01525		1.2				●						
	CNGA 120404T02025	-	T02025	0.4					●					
	120408T02025	CNGA 120408		0.8		●			●	●				
	120412T02025	120412		1.2		●			●	●				
	CNGA 160612T02025	CNGA 160612	T02025	1.2						●				D8
	CNMA 120408S01525	CNMA 120408	S01525	0.8				●						D8
	CNMA 120408S03030	CNMA 120408-T30	S03030	0.8				●						D8 F42 F66
	120412S03030	120412-T30		1.2				●						
	CNGN 120408S01025	CNGN 120408	S01025	0.8	●									D22
	120412S01025	120412		1.2	●									
	120416S01025	120416		1.6	●									
	CNGN 120404T00520	-	T00520	0.4					●					
	120408T00520	-		0.8					●					
	CNGN 120408T01020	CNGN 120408	T01020	0.8								●		
	120412T01020	120412		1.2								●		
	CNGN 120404T02025	-	T02025	0.4					●					
	120408T02025	CNGN 120408		0.8					●	●				
	120412T02025	120412		1.2					●	●				
	120416T02025	120416		1.6						●				
	CNGN 120708S01525	CNGN 120708	S01525	0.8				●						
	CNGN 120708T01020	CNGN 120708	T01020	0.8								●		
	120712T01020	120712		1.2								●		
	CNGN 120712T01525	CNGN 120712T01525	T01525	1.2		●								
	120716T01525	120716T01525		1.6		●								
	CNGN 120704T02025	CNGN 120704	T02025	0.4		●								
	120708T02025	120708		0.8		●								
	120712T02025	120712		1.2		●		●						
	120716T02025	120716		1.6		●								
	CNGN 160708T02025	CNGN 160708	T02025	0.8		●								
	160712T02025	160712		1.2		●								
	160716T02025	160716		1.6		●								
	CNMN 120708T02025	CNMN 120708	T02025	0.8		●								
	120712T02025	120712		1.2		●								
	CNGX 120708T02025	-	T02025	0.8						●				D28 F73
	120712T02025	-		1.2						●				
	120716T02025	-		1.6						●				

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

55°Diamond • Negative

(mm)

Description	A	T	ød
DNGA1504_	12.70	4.76	5.16
1506_		6.35	
DNGN1504_	12.70	4.76	-
1507_		7.94	

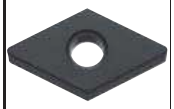
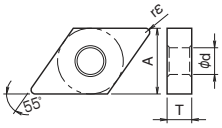
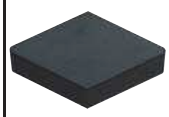
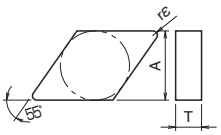
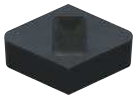
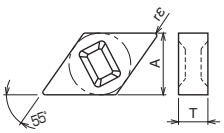
(mm)

Description	A	T	ød
DNGX 1207_	10.00	7.94	-
DNGX 1507_	12.70	7.94	-

Edge Specification			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered + Honed Cutting Edge	S01225	0.12mm X 25° Chamfered + Honed Cutting Edge
T	Chamfered Cutting Edge	T01215	0.12mm X 15° Chamfered Cutting Edge

Classification of usage
- ✖: Interruption / 1st Choice
- ✖: Interruption / 2nd Choice
- ◓: Light Interruption / 1st Choice
- ◔: Light Interruption / 2nd Choice
- ●: Continuous / 1st Choice
- ○: Continuous / 2nd Choice

		KA30	A65		A66N	PT600M	KS6000		CF1	
K	Gray Cast Iron (With Scale)					◓	✖			
K	Gray Cast Iron (Without Scale)	●		◔		◓				
S	Heat-resistant alloy									
H	Hard Materials				○	●				

Insert	Description	(Previous Description)	Edge Preparation	Dim. (mm) rε	KA30	A65		A66N	PT600M	KS6000		CF1		Ref. Page for Toolholder
 	DNGA 150408S01025	DNGA 150408	S01025	0.8	●									D10 D11 F43
	150412S01025	150412		1.2	●									
	DNGA 150404S01525	DNGA 150404	S01525	0.4				●						
	150408S01525	150408		0.8				●						
	DNGA 150404S02025	-	S02025	0.4					●					
	150408S02025	-		0.8					●					
	DNGA 150408S03030	DNGA 150408-T30	S03030	0.8				●						
	DNGA 150404T02025	DNGA 150404	T02025	0.4		●			●					
	150408T02025	150408		0.8		●			●	●				
	150412T02025	-		1.2					●	●				
	150416T02025	150416		1.6		●								
	DNGA 150604S01525	DNGA 150604	S01525	0.4				●						
	150608S01525	150608		0.8				●						
	150612S01525	150612		1.2				●						
	150616S01525	150616		1.6				●						
	DNGA 150604T01525	DNGA 150604T01525	T01525	0.4		●								
	150608T01525	150608T01525		0.8		●								
	150612T01525	150612T01525		1.2		●								
	DNGA 150604T02025	-	T02025	0.4					●					
	150608T02025	-		0.8					●					
	150612T02025	-		1.2					●					
 	DNGN 150404S01025	DNGN 150404	S01025	0.4	●									D23
	150408S01025	150408		0.8	●									
	150412S01025	150412		1.2	●									
	150416S01025	150416		1.6	●									
	DNGN 150408T02025	-	T02025	0.8					●					
	DNGN 150704S01525	DNGN 150704	S01525	0.4				●						
	150708S01525	150708		0.8				●						
	150712S01525	150712		1.2				●						
	DNGN 150704S02025	-	S02025	0.4					●					
	150708S02025	-		0.8					●					
	150712S02025	-		1.2					●					
	DNGN 150704T02025	DNGN 150704	T02025	0.4		●								
	150708T02025	150708		0.8		●								
	150712T02025	150712		1.2		●								
	150716T02025	150716		1.6		●								
 	DNGX 120708T02025	-	T02025	0.8						●				D29 F73
	120712T02025	-		1.2						●				
	120716T02025	-		1.6						●				
	DNGX 150708T02025	-	T02025	0.8						●				D29
	150712T02025	-		1.2						●				
	150716T02025	-		1.6						●				

Inserts are sold in 10 piece boxes.

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

75°Diamond • Negative
Round • Negative

(mm)

Description	A	T	ød
ENGN 1307_	12.70	7.94	-
RNGN 0603_	6.35	3.18	
RNGN 0903_	9.525	3.18	
0904_		4.76	
0907_		7.94	

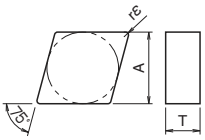
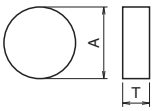
(mm)

Description	A	T	ød
RNGN 1204_	12.70	4.76	-
1207_		7.94	
RNGN 1507_	15.875	7.94	
RNGN 2507_	25.40	7.94	

Edge Specification			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered + Honed Cutting Edge	S01225	0.12mm X 25° Chamfered + Honed Cutting Edge
T	Chamfered Cutting Edge	T01215	0.12mm X 15° Chamfered Cutting Edge

Classification of usage
✖: Interruption / 1st Choice
✖: Interruption / 2nd Choice
●: Light Interruption / 1st Choice
○: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice

K	Gray Cast Iron (With Scale)					●	✖			
	Gray Cast Iron (Without Scale)			○		●				
S	Heat-resistant alloy								●	
H	Hard Materials				○	●			○	

Insert		Description	(Previous Description)	* Edge Preparation	Dim. (mm) rε	Alumina Ceramic KA30	Alumina Ceramic A65		PVD Coated Ceramic A66N	MEGACOAT Ceramic PT600M	Silicon Nitride Ceramic KS6000		Cell Fiber CF1		Ref. Page for Toolholder
		ENGN 130708S01525	ENGN 130708	S01525	0.8				●						D23 F72
		130712S01525			1.2				●						
		ENGN 130708S02025	-	S02025	0.8					●					
		130712S02025	-		1.2					●					
		ENGN 130704T02025	ENGN 130704	T02025	0.4		●			●					
		130708T02025	130708		0.8		●			●					
		130712T02025	130712		1.2		●			●					
		130716T02025	130716		1.6		●			●					
		130720T02025	130720		2.0		●			●					
		130730T02025	130730		3.0		●			●					
		RNGN 060300T01525	RNGN 060300T01525	T01525	-				●						-
		RNGN 090300T01525	RNGN 090300T01525	T01525	-				●						D33
		RNGN 090400S01525	RNGN 090400	S01525	-				●						D27 D33
		090400S02025	-	S02025	-					●					
		090400T01020	-	T01020	-								●		
		090400T02025	RNGN 090400	T02025	-		●			●					
		RNGN 090700T01020	-	T01020	-								●		
		RNGN 120400S01525	RNGN 120400	S01525	-				●						
		120400S02025	-	S02025	-					●					
		120400T01020	-	T01020	-								●		
		120400T01525	RNGN 120400T01525	T01525	-				●						
		120400T02025	RNGN 120400	T02025	-		●	●		●	●				
		RNGN 120700K15015	RNGN 120700K	K15015	-			●	●	●					
		120700S01525	RNGN 120700	S01525	-				●						
		120700S02025	-	S02025	-					●					
		120700S03030	RNGN 120700-T30	S03030	-				●						
		120700T01020	-	T01020	-								●		
		120700T01525	RNGN 120700T01525	T01525	-				●						
		120700T02025	RNGN 120700	T02025	-		●	●		●	●				
		RNGN 150700S01525	RNGN 150700	S01525	-				●						
		150700S02025	-	S02025	-					●					
		150700T02025	RNGN 150700	T02025	-		●			●					
		RNGN 250700P20015	RNGN 250700K	P20015	-				●						

* For edge preparation **K**, refer to the table below.

Edge Specification			
Symbol	Cutting Edge Spec.	Example	
K	Double Chamfered Cutting Edge	K15015	1.5mm X 15° Chamfered Cutting Edge

・Note: Symbol "K" and "P" describe only the largest chamfer width and its ans.

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

90°Square • Negative

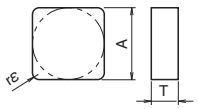
(mm)

Description	A	T	ød
SN_A1204_	12.70	4.76	5.16
SNGN1204_			-
SNGN1207_		7.94	

Edge Specification			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered + Honed Cutting Edge	S01225	0.12mm X 25° Chamfered + Honed Cutting Edge
T	Chamfered Cutting Edge	T01215	0.12mm X 15° Chamfered Cutting Edge

Classification of usage
- ✖: Interruption / 1st Choice
- ✖: Interruption / 2nd Choice
- ◕: Light Interruption / 1st Choice
- ◔: Light Interruption / 2nd Choice
- ●: Continuous / 1st Choice
- ○: Continuous / 2nd Choice

		KA30	A65		A66N	PT600M	KS6000		CF1	
K	Gray Cast Iron (With Scale)					◕	✖			
K	Gray Cast Iron (Without Scale)	●		◔		◕				
S	Heat-resistant alloy									
H	Hard Materials				○	●				

Insert	Description	(Previous Description)	Edge Preparation	Dim. (mm) rε	KA30	A65		A66N	PT600M	KS6000		CF1		Ref. Page for Toolholder
	SNGA 120408S01525	SNGA 120408	S01525	0.8				●						D12 D13
	120412S01525			1.2				●						
	SNGA 120408S02025	-	S02025	0.8					●					
	120412S02025	-		1.2					●					
	SNGA 120408T01525	SNGA 120408T01525	T01525	0.8				●						
	120412T01525	120412T01525		1.2				●						
	SNGA 120408T02025	SNGA 120408	T02025	0.8		●			●	●				
	120412T02025	120412		1.2		●			●	●				
	120416T02025	120416		1.6					●	●				
	SNMA 120408S03030	SNMA 120408-T30	S03030	0.8				●						
	SNGN 120404S01025	SNGN 120404	S01025	0.4	●									D24 D25 D34 D35 F72
	120408S01025	120408		0.8	●									
	120412S01025	120412		1.2	●									
	120416S01025	120416		1.6	●									
	120420S01025	120420		2.0	●									
	SNGN 120408S01525	SNGN 120408	S01525	0.8				●						
	120412S01525	120412		1.2				●						
	120416S01525	120416		1.6				●						
	SNGN 120408S02025	-	S02025	0.8					●					
	120412S02025	-		1.2					●					
	120416S02025	-		1.6					●					
	SNGN 120408T00520	SNGN 120408-T05	T00520	0.8	●	●								
	120412T00520	120412-T05		1.2	●									
	120416T00520	120416-T05		1.6		●								
	SNGN 120408T01020	-	T01020	1.2				●				●		
	120412T01020	-										●		
	120416T01020	-										●		
	120420T01020	-										●		
	SNGN 120404T02025	SNGN 120404	T02025	0.4		●			●					
	120408T02025	120408		0.8		●			●	●				
	120412T02025	120412		1.2		●			●	●				
	120416T02025	120416		1.6		●			●	●				
	120420T02025	120420		2.0		●			●	●				
	SNGN 120704S01025	SNGN 120704	S01025	0.4	●									
	120708S01025	120708		0.8	●									
	120712S01025	120712		1.2	●									
	120716S01025	120716		1.6	●									
	SNGN 120704S01525	SNGN 120704	S01525	0.4				●						
	120708S01525	120708		0.8				●						
	120712S01525	120712		1.2				●						
	120716S01525	120716		1.6				●						
	120720S01525	120720		2.0				●						

Inserts are sold in 10 piece boxes.

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

90°Square • Negative

(mm)

Description	A	T	ød
SN_N 1207_	12.70	7.94	-
SNGN 1507_	15.875		
1907_	19.05		
2507_	25.40		

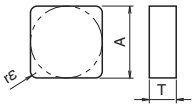
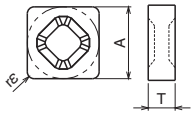
(mm)

Description	A	T	ød
SNGX1207_	12.70	7.94	-
SNGX1507_	15.875		

Edge Specification			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered + Honed Cutting Edge	S01225	0.12mm X 25° Chamfered + Honed Cutting Edge
T	Chamfered Cutting Edge	T01215	0.12mm X 15° Chamfered Cutting Edge

Classification of usage
- ✖: Interruption / 1st Choice
- ✖: Interruption / 2nd Choice
- ◓: Light Interruption / 1st Choice
- ◔: Light Interruption / 2nd Choice
- ●: Continuous / 1st Choice
- ○: Continuous / 2nd Choice

		KA30	A65		A66N	PT600M	KS6000		CF1	
K	Gray Cast Iron (With Scale)					◓	✖			
	Gray Cast Iron (Without Scale)					◓				
S	Heat-resistant alloy								◓	
H	Hard Materials					●			◔	

Insert		Description	(Previous Description)	Edge Preparation	Dim. (mm) rε	KA30	A65		A66N	PT600M	KS6000		CF1		Ref. Page for Toolholder
		SNGN 120704S02025	-	S02025	0.4					●					D24 D25 D34 D35
		120708S02025	-		0.8					●					
		120712S02025	-		1.2					●					
		120716S02025	-		1.6					●					
		120720S02025	-		2.0					●					
		SNGN 120708T01020	-	T01020	0.8								●		
		120712T01020	-		1.2								●		
		120716T01020	-		1.6								●		
		120720T01020	-		2.0								●		
		SNGN 120704T02025	SNGN 120704	T02025	0.4		●			●					
		120708T02025	120708		0.8		●			●	●				
		120712T02025	120712		1.2		●			●	●				
		120716T02025	120716		1.6		●			●	●				
		120720T02025	120720		2.0		●			●					
		SNGN 150712T02025	SNGN 150712	T02025	1.2		●			●	●				
		150716T02025	150716		1.6		●			●	●				
		SNMN 120716T02025	SNMN 120716	T02025	1.6		●								
		SNGX 120708T02025	-	T02025	0.8						●				D30 D31 F73
		120712T02025	-		1.2						●				
		120716T02025	-		1.6						●				
		120720T02025	-		2.0						●				
		SNGX 150708T02025	-	T02025	0.8						●				D30 D31
		150712T02025	-		1.2						●				
		150716T02025	-		1.6						●				
		150720T02025	-		2.0						●				
		SNGX 150712T03030	-	T03030	1.2						●				
		150716T03030	-		1.6						●				
		150720T03030	-		2.0						●				

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

60°Triangle • Negative

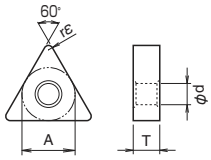
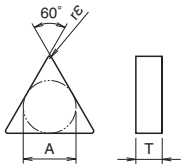
(mm)

Description	A	T	ød
TNGA 1604_	9.525	4.76	3.81
TNGN 1103_	6.35	3.18	-
TNGN 1604_	9.525	4.76	
1607_		7.94	

Edge Specification			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered + Honed Cutting Edge	S01225	0.12mm X 25° Chamfered + Honed Cutting Edge
T	Chamfered Cutting Edge	T01215	0.12mm X 15° Chamfered Cutting Edge

Classification of usage
- ✖: Interruption / 1st Choice
- ✖: Interruption / 2nd Choice
- ◕: Light Interruption / 1st Choice
- ◔: Light Interruption / 2nd Choice
- ●: Continuous / 1st Choice
- ○: Continuous / 2nd Choice

		Alumina Ceramic			PVD Coated Ceramic	MEGACOAT Ceramic	Silicon Nitride Ceramic		Cell Fiber	
		KA30	A65	KT66	A66N	PT600M	KS6000		CF1	
K	Gray Cast Iron (With Scale)					◕	✖			
K	Gray Cast Iron (Without Scale)	●		◔		◕				
S	Heat-resistant alloy									
H	Hard Materials				○	●				

Insert		Description		(Previous Description)		Edge Preparation	Dim. (mm) rε	KA30	A65	KT66	A66N	PT600M	KS6000		CF1		Ref. Page for Toolholder
		TNGA	160408S01025	TNGA	160408	S01025	0.8	●									D14 D15 F43 F68
		TNGA	160404S01525	TNGA	160404	S01525	0.4				●						
			160408S01525		160408		0.8				●						
			160412S01525		160412		1.2				●						
		TNGA	160404S02025		-	S02025	0.4					●					
			160408S02025		-		0.8					●					
			160412S02025		-		1.2					●					
		TNGA	160408S03030	TNGA	160408-T30	S03030	0.8				●						
			160412S03030		160412-T30		1.2				●						
		TNGA	160408T00520	TNGA	160408-T05	T00520	0.8	●									
		TNGA	160404T01525	TNGA	160404T01525	T01525	0.4				●						
			160408T01525		160408T01525		0.8				●						
			160412T01525		160412T01525		1.2				●						
		TNGA	160404T02025	TNGA	160404	T02025	0.4		●			●					
			160408T02025		160408		0.8		●			●	●				
			160412T02025		160412		1.2					●	●				
		TNGN	110308S00520	TNGN	110308	S00520	0.8				●						D36 F74
		TNGN	110304T00520	TNGN	110304	T00520	0.4		●			●					
			110308T00520		110308		0.8		●			●					
			110312T00520		110312		1.2		●			●					
		TNGN	110304T01525	TNGN	110304T01525	T01525	0.4				●						
			110308T01525		110308T01525		0.8				●						
			110312T01525		110312T01525		1.2				●						
		TNGN	160404S01025	TNGN	160404	S01025	0.4	●									D26
			160408S01025		160408		0.8	●									
			160412S01025		160412		1.2	●									
			160416S01025		160416		1.6	●									
			160420S01025		160420		2.0	●									
		TNGN	160404S01525	TNGN	160404	S01525	0.4				●						
			160408S01525		160408		0.8				●						
			160412S01525		160412		1.2				●						
		TNGN	160404S02025		-	S02025	0.4					●					
			160408S02025		-		0.8					●					
			160412S02025		-		1.2					●					
		TNGN	160404T00520	TNGN	160404-T05	T00520	0.4	●	●								
			160408T00520		160408-T05		0.8	●	●								
			160412T00520		160412-T05		1.2	●									
			160416T00520		160416-T05		1.6	●									
			160420T00520		160420-T05		2.0	●									
		TNGN	160404T02025	TNGN	160404	T02025	0.4		●			●					
			160408T02025		160408		0.8		●			●	●				
			160412T02025		160412		1.2		●			●					

Inserts are sold in 10 piece boxes.

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

60°Triangle • Negative
35°Diamond • Negative
80°Trigon • Negative

(mm)

Description	A	T	ød
TNGN1607_	9.525	7.94	-
TNGN2204_	12.70	4.76	

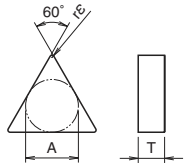
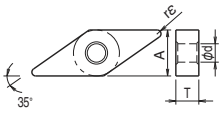
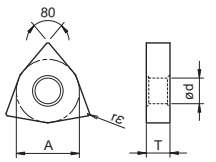
(mm)

Description	A	T	ød
VN_A1604_	9.525	4.76	3.81
WNGA0804_	12.70	4.76	5.16

Edge Specification			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered + Honed Cutting Edge	S01225	0.12mm X 25° Chamfered + Honed Cutting Edge
T	Chamfered Cutting Edge	T01215	0.12mm X 15° Chamfered Cutting Edge

Classification of usage
- ✖: Interruption / 1st Choice
- ✱: Interruption / 2nd Choice
- ◕: Light Interruption / 1st Choice
- ◔: Light Interruption / 2nd Choice
- ●: Continuous / 1st Choice
- ○: Continuous / 2nd Choice

K	Gray Cast Iron (With Scale)										
	Gray Cast Iron (Without Scale)			◔		◕					
S	Heat-resistant alloy										
H	Hard Materials				○	●					

Insert		Description	(Previous Description)	Edge Preparation	Dim. (mm) rε	Alumina Ceramic KA30	Alumina Ceramic A65	Alumina Ceramic KT66	PVD Coated Ceramic A66N	MEGACOAT Ceramic PT600M	Silicon Nitride Ceramic KS6000		Cell Fiber CF1		Ref. Page for Toolholder
		TNGN 160708S01525	TNGN 160708	S01525	0.8				●						D26
		TNGN 160708S02025	-	S02025	0.8					●					
		TNGN 160704T02025	TNGN 160704	T02025	0.4		●			●					
		160708T02025	160708		0.8		●			●					
		160712T02025	160712		1.2		●			●					
		160716T02025	160716		1.6		●								
		160720T02025	160720		2.0		●								
		TNGN 220408T02025	TNGN 220408T02025	T02025	0.8		●								-
		220412T02025	220412T02025		1.2		●								
		220416T02025	220416T02025		1.6		●								
		VNGA 160404S01525	VNGA 160404	S01525	0.4				●						D16 D17 D18
		160408S01525	160408		0.8				●						
		VNGA 160404S02025	-	S02025	0.4					●					
		160408S02025	-		0.8					●					
		VNGA 160404T01525	VNGA 160404T01525	T01525	0.4										
		160408T01525	160408T01525		0.8										
		VNGA 160404T02025	VNGA 160404	T02025	0.4		●			●					
		160408T02025	160408		0.8		●			●					
		160412T02025	-		1.2					●					
		VNMA 160408S01525	VNMA 160408	S01525	0.8				●						
		WNGA 080408S01525	WNGA 080408	S01525	0.8				●						D20 F70
		WNGA 080404T01525	WNGA 080404T01525	T01525	0.4				●						
		080408T01525	080408T01525		0.8				●						
		080412T01525	080412T01525		1.2				●						
		WNGA 080412T02025	WNGA 080412T02025	T02025	1.2						●				

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

90°Square / 90°Triangle • Positive

(mm)

Description	A	T	øα
SPGN 0903_	9.525	3.18	11°
SPGN 1203_	12.70	3.18	

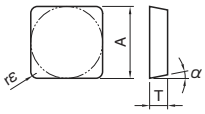
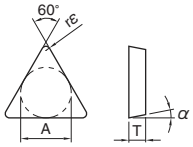
(mm)

Description	A	T	øα
TBGN 0601_	3.97	1.59	5°
TCGN 1604_	9.525	4.76	7°
TPGN 0902_	5.56	2.38	11°
1103_	6.35	3.18	
1603_	9.525		

Edge Specification			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered + Honed Cutting Edge	S01225	0.12mm X 25° Chamfered + Honed Cutting Edge
T	Chamfered Cutting Edge	T01215	0.12mm X 15° Chamfered Cutting Edge

Classification of usage
- ✖: Interruption / 1st Choice
- ✖: Interruption / 2nd Choice
- ●: Light Interruption / 1st Choice
- ○: Light Interruption / 2nd Choice
- ●: Continuous / 1st Choice
- ○: Continuous / 2nd Choice

		Alumina Ceramic			PVD Coated Ceramic	MEGACOAT Ceramic	Silicon Nitride Ceramic		Cell Fiber	
		KA30	A65		A66N	PT600M	KS6000		CF1	
K	Gray Cast Iron (With Scale)									
	Gray Cast Iron (Without Scale)			○		●				
S	Heat-resistant alloy									
H	Hard Materials				○	●				

Insert		Description	(Previous Description)	Edge Preparation	Dim. (mm) rε	KA30	A65		A66N	PT600M	KS6000		CF1		Ref. Page for Toolholder
		SPGN 090308S00820	SPGN 090308	S00820	0.8				●						E28 F60
		SPGN 120308S00820	SPGN 120308	S00820	0.8				●	●					
		SPGN 090308T00820	SPGN 090308	T00820	0.8		●			●					
		SPGN 120308T00820	SPGN 120308	T00820	0.8		●			●					
		120312T00820	120312		1.2		●			●					
		120316T00820	-		1.6					●					
		TBGN 060102S00820	TBGN 060102	S00820	0.2				●						-
		060104S00820	060104		0.4				●	●					
		060108S00820	060108		0.8				●	●					
		TBGN 060102T00820	-	T00820	0.2				●						
		060104T00820	-		0.4					●					
		060108T00820	-		0.8					●					
		TCGN 160404T00820	TCGN 160404	T00820	0.4		●								F72
		160408T00820	160408		0.8		●								
		TPGN 090204T00820	-	T00820	0.4					●					F61
		090208T00820	-		0.8					●					
		TPGN 110302S00820	TPGN 110302	S00820	0.2				●						E29 F61
		110304S00820	110304		0.4				●	●					
		110308S00820	110308		0.8				●	●					
		TPGN 110304T00820	TPGN 110304	T00820	0.4		●		●	●					
		110308T00820	110308		0.8		●		●	●					
		TPGN 160304S00820	TPGN 160304	S00820	0.4				●	●					
		160308S00820	160308		0.8				●	●					
		160312S00820	160312		1.2				●	●					
		TPGN 160302T00820	TPGN 160302	T00820	0.2		●								
		160304T00820	160304		0.4		●			●					
		160308T00820	160308		0.8		●			●					
		160312T00820	160312		1.2		●			●					

Inserts are sold in 10 piece boxes.

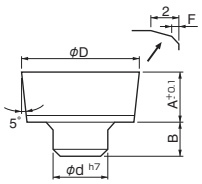
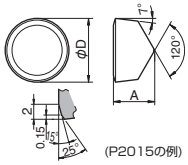
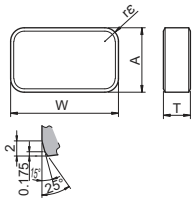
● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts for Hardened Rolls

Edge Specification			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered + Honed Cutting Edge	S01225	0.12mm X 25° Chamfered + Honed Cutting Edge
T	Chamfered Cutting Edge	T01215	0.12mm X 15° Chamfered Cutting Edge

Classification of usage
✖: Interruption / 1st Choice
✖: Interruption / 2nd Choice
◕: Light Interruption / 1st Choice
◔: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice

		KA30	A65		A66N	PT600M	KS6000		CF1	
K	Gray Cast Iron (With Scale)					✖				
K	Gray Cast Iron (Without Scale)									
S	Heat-resistant alloy								◕	
H	Hard Materials			◔		◕				

Insert		Description	(Previous Description)	*Edge Preparation	Dimension (mm) øD	ød	A	B	F	KA30	A65		A66N	PT600M	KS6000		CF1		Ref. Page for Toolholder
		RBG 12K20003	-	K20003	12	6	6	3	0.2					●					-
		16K20003	RBG 16W	K20003	16	8	8	5	0.2		●			●					
		20K20003	RBG 20W	K20003	20	10	10	5	0.3		●			●					
	 (P2015の例)	RCGX 090700P20015	-	P20015	9.525	-	8	-	-		●		●	●					-
		090700S01020		S01020													●		
		090700T01525	RCGX090700T01525	T01525									●						
		RCGX 120700P20015	-	P20015	12.7	-	8	-	-		●		●	●					
		120700S01020		S01020													●		
		120700T01525	RCGX120700T01525	T01525									●						
		RCGX160700K20015	RCGX160700	K20015	15.875	-	8	-	-		●								
		RCGX191000P20015	RCGX191000	P20015	19.05	-	10				●								
		RCGX251200P20015	RCGX251200	P20015	25.40	-	12				●								
		LNUN 381232P20015	LNUN 381232	P20015	W= 38.1	T= 12.70	A= 19.05	rε= 3.18	-		●								-

* For edge specification **K** and **P**, refer to the table below.

Edge Specification			
Symbol	Cutting Edge Spec.	Example	
K	Double Chamfered Cutting Edge	K20003	0.08in X 3° Chamfered Cutting Edge
P	Double Chamfered + Honed Cutting Edge	P20015	2.00mm X 15° Chamfered + Honed Cutting Edge

・Note: Symbol "K" and "P" describe only the largest chamfer width and its ages.

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

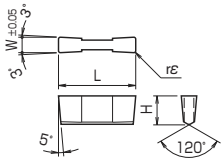
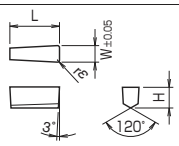
RBG Inserts are sold in 1 piece boxes.

Grooving Inserts

Edge Specification			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered + Honed Cutting Edge	S01225	0.12mm X 25° Chamfered + Honed Cutting Edge
T	Chamfered Cutting Edge	T01215	0.12mm X 15° Chamfered Cutting Edge

Classification of usage
✖: Interruption / 1st Choice
✖: Interruption / 2nd Choice
●: Light Interruption / 1st Choice
○: Light Interruption / 2nd Choice
●: Continuous / 1st Choice
○: Continuous / 2nd Choice

		Alumina Ceramic			PVD Coated Ceramic	MEGACOAT Ceramic	Silicon Nitride Ceramic		Cell Fiber	
		KA30	A65		A66N	PT600M	KS6000		CF1	
K	Gray Cast Iron (With Scale)									
K	Gray Cast Iron (Without Scale)		○			●				
S	Heat-resistant alloy									
H	Hard Materials				○	●				

Insert		Description	(Previous Description)	Edge Preparation	Dimension (mm) W	rε	L	H	KA30	A65		A66N	PT600M	KS6000		CF1		Ref. Page for Toolholder
		GH 4020-05	-	S01020	4.0	0.5	20	7.5				●						G16 G45
		4020-05		T01020						●			●					
		5020-05		S01020	5.0							●						
		5020-05		T01020						●			●					
		6020-05		T01020	6.0					●			●					
		7020-05		T01020	7.0					●			●					
		GS 91-5	-	T01020	5.0	0.5	15	7.5		●								G15
		91-6		T01020	6.0	0.8												
		91-7		T01020	7.0													
		91-8		T01020	8.0					●								

Inserts are sold in 10 piece boxes.

 ● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)